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Article

Neutrosophic Version of Separates Groups of Cells in Cancer's Recognition on Neutrosophic SuperHyperGraphs

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Abstract: In this research, assume a SuperHyperGraph. Then a neutrosophic SuperHyperMatching $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperEdges such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge; a neutrosophic SuperHyperMatching SuperHyperPolynomial $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the neutrosophic SuperHyperPolynomial contains the neutrosophic coefficients defined as the neutrosophic number of the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperEdges such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge and the neutrosophic power is neutrosophicly corresponded to its neutrosophic coefficient; a neutrosophic R-SuperHyperMatching $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperVertices such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge; a neutrosophic R-SuperHyperMatching SuperHyperPolynomial $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the neutrosophic SuperHyperPolynomial contains the neutrosophic coefficients defined as the neutrosophic number of the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperVertices such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge and the neutrosophic power is neutrosophicly corresponded to its neutrosophic coefficient. It's useful to define a "neutrosophic" version of a SuperHyperMatching. Since there's more ways to get type-results to make a SuperHyperMatching more understandable. For the sake of having neutrosophic SuperHyperMatching, there's a need to "redefine" the notion of a "SuperHyperMatching ". A basic familiarity with neutrosophic SuperHyperMatching theory, SuperHyperGraphs theory, and neutrosophic SuperHyperGraphs theory are proposed.

Keywords: Neutrosophic SuperHyperGraph; (Neutrosophic) SuperHyperMatching; Cancer's Neutrosophic Recognition

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AMS Subject Classification: 05C17, 05C22, 05E45

1. Background

Fuzzy set in Ref.[57] by Zadeh (1965), intuitionistic fuzzy sets in Ref. [44] by Atanassov (1986), a first step to a theory of the intuitionistic fuzzy graphs in Ref. [54] by Shannon and Atanassov (1994), a unifying field in logics neutrosophy: neutrosophic probability, set and logic, rehoboth in Ref. [55] by Smarandache (1998), single-valued neutrosophic sets in Ref. [56] by Wang et al.

(2010), single-valued neutrosophic graphs in Ref. [48] by Broumi et al. (2016), operations on single-valued neutrosophic graphs in Ref. [40] by Akram and Shahzadi (2017), neutrosophic soft graphs in Ref. [53] by Shah and Hussain (2016), bounds on the average and minimum attendance in preference-based activity scheduling in Ref. [42] by Aronshtam and Ilani (2022), investigating the recoverable robust single machine scheduling problem under interval uncertainty in Ref. [47] by Bold and Goerigk (2022), polyhedra associated with locating-dominating, open locating-dominating and locating total-dominating sets in graphs in Ref. [41] by G. Argiroffo et al. (2022), a Vizing-type result for semi-total domination in Ref. [43] by J. Asplund et al. (2020), total domination cover rubbling in Ref. [45] by R.A. Beeler et al. (2020), on the global total k-domination number of graphs in Ref. [46] by S. Bermudo et al. (2019), maker–breaker total domination game in Ref. [49] by V. Gledel et al. (2020), a new upper bound on the total domination number in graphs with minimum degree six in Ref. [50] by M.A. Henning, and A. Yeo (2021), effect of predomination and vertex removal on the game total domination number of a graph in Ref. [51] by V. Irsic (2019), hardness results of global total k-domination problem in graphs in Ref. [52] by B.S. Panda, and P. Goyal (2021), are studied.
Look at [35–39] for further researches on this topic. See the seminal researches [1–3]. The formalization of the notions on the framework of Extreme Failed SuperHyperClique theory, Neutrosophic Failed SuperHyperClique theory, and (Neutrosophic) SuperHyperGraphs theory at [4–32]. Two popular research books in Scribd in the terms of high readers, 2702 and 3466 respectively, on neutrosophic science is on [33,34].

2. Motivation and Contributions

In this research, there are some ideas in the featured frameworks of motivations.

Question 1. *How to define the SuperHyperNotions and to do research on them to find the " amount of SuperHyperMatching" of either individual of cells or the groups of cells based on the fixed cell or the fixed group of cells, extensively, the "amount of SuperHyperMatching" based on the fixed groups of cells or the fixed groups of group of cells?*

Question 2. *What are the best descriptions for the "Cancer's Recognition" in terms of these messy and dense SuperHyperModels where embedded notions are illustrated?*

It's motivation to find notions to use in this dense model is titled "SuperHyperGraphs". Thus it motivates us to define different types of " SuperHyperMatching" and "neutrosophic SuperHyperMatching" on "SuperHyperGraph" and "Neutrosophic SuperHyperGraph".

3. Preliminaries

In this subsection, the basic material which is used in this research, is presented. Also, the new ideas and their clarifications are elicited.

Definition 3. ((neutrosophic) SuperHyperMatching).
Assume a SuperHyperGraph. Then

(i) an **extreme SuperHyperMatching** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the maximum cardinality of a SuperHyperSet S of high cardinality SuperHyperEdges such that there's no SuperHyperVertex not to in a SuperHyperEdge and there's no SuperHyperEdge to have a SuperHyperVertex in a SuperHyperEdge;

(ii) a **neutrosophic SuperHyperMatching** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperEdges such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge;

(iii) an **extreme SuperHyperMatching SuperHyperPolynomial** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the extreme SuperHyperPolynomial contains the

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coefficients defined as the number of the maximum cardinality of a SuperHyperSet S of high cardinality SuperHyperEdges such that there's no SuperHyperVertex not to in a SuperHyperEdge and there's no SuperHyperEdge to have a SuperHyperVertex in a SuperHyperEdge and the power is corresponded to its coefficient;

(iv) a **neutrosophic SuperHyperMatching SuperHyperPolynomial** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the neutrosophic SuperHyperPolynomial contains the neutrosophic coefficients defined as the neutrosophic number of the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperEdges such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge and the neutrosophic power is neutrosophicly corresponded to its neutrosophic coefficient;

(v) an **extreme R-SuperHyperMatching** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the maximum cardinality of a SuperHyperSet S of high cardinality SuperHyperVertices such that there's no SuperHyperVertex not to in a SuperHyperEdge and there's no SuperHyperEdge to have a SuperHyperVertex in a SuperHyperEdge;

(vi) a **neutrosophic R-SuperHyperMatching** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperVertices such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge;

(vii) an **extreme R-SuperHyperMatching SuperHyperPolynomial** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the extreme SuperHyperPolynomial contains the coefficients defined as the number of the maximum cardinality of a SuperHyperSet S of high cardinality SuperHyperVertices such that there's no SuperHyperVertex not to in a SuperHyperEdge and there's no SuperHyperEdge to have a SuperHyperVertex in a SuperHyperEdge and the power is corresponded to its coefficient;

$(viii)$ a **neutrosophic R-SuperHyperMatching SuperHyperPolynomial** $\mathcal{C}(NSHG)$ for a neutrosophic SuperHyperGraph $NSHG : (V, E)$ is the neutrosophic SuperHyperPolynomial contains the neutrosophic coefficients defined as the neutrosophic number of the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of high neutrosophic cardinality neutrosophic SuperHyperVertices such that there's no neutrosophic SuperHyperVertex not to in a neutrosophic SuperHyperEdge and there's no neutrosophic SuperHyperEdge to have a neutrosophic SuperHyperVertex in a neutrosophic SuperHyperEdge and the neutrosophic power is neutrosophicly corresponded to its neutrosophic coefficient.

Definition 4. ((neutrosophic)$\delta-$SuperHyperMatching).
Assume a SuperHyperGraph. Then

(i) an $\delta-$**SuperHyperMatching** is a <u>maximal</u> of SuperHyperVertices with a <u>maximum</u> cardinality such that either of the following expressions hold for the (neutrosophic) cardinalities of SuperHyperNeighbors of $s \in S$:

$$|S \cap N(s)| > |S \cap (V \setminus N(s))| + \delta; \tag{3.1}$$
$$|S \cap N(s)| < |S \cap (V \setminus N(s))| + \delta. \tag{3.2}$$

The Expression (3.1), holds if S is an $\delta-$**SuperHyperOffensive**. And the Expression (3.2), holds if S is an $\delta-$**SuperHyperDefensive**;

(ii) a **neutrosophic $\delta-$SuperHyperMatching** is a maximal neutrosophic of SuperHyperVertices with maximum neutrosophic cardinality such that either of the following expressions hold for the neutrosophic cardinalities of SuperHyperNeighbors of $s \in S$:

$$|S \cap N(s)|_{neutrosophic} > |S \cap (V \setminus N(s))|_{neutrosophic} + \delta; \tag{3.3}$$

$$|S \cap N(s)|_{neutrosophic} < |S \cap (V \setminus N(s))|_{neutrosophic} + \delta. \tag{3.4}$$

The Expression (3.3), holds if S is a **neutrosophic $\delta-$SuperHyperOffensive**. And the Expression (3.4), holds if S is a **neutrosophic $\delta-$SuperHyperDefensive**.

4. neutrosophic SuperHyperMatching

The SuperHyperNotion, namely, SuperHyperMatching, is up. Thus the non-obvious neutrosophic SuperHyperMatching, S is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not: S is the neutrosophic SuperHyperSet, not: S does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only S in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, a neutrosophic free-triangle SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets, are S. A connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ as Linearly-over-packed SuperHyperModel is featured on the Figures.

Example 5. Assume the SuperHyperGraphs in the Figures (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (13), (14), (15), (16), (17), (18), (19), and (20).

- On the Figure (1), the neutrosophic SuperHyperNotion, namely, neutrosophic SuperHyperMatching, is up. E_1 and E_3 are some empty neutrosophic SuperHyperEdges but E_2 is a loop neutrosophic SuperHyperEdge and E_4 is a neutrosophic SuperHyperEdge. Thus in the terms of neutrosophic SuperHyperNeighbor, there's only one neutrosophic SuperHyperEdge, namely, E_4. The neutrosophic SuperHyperVertex, V_3 is neutrosophic isolated means that there's no neutrosophic SuperHyperEdge has it as a neutrosophic endpoint. Thus the neutrosophic SuperHyperVertex, V_3, **is** excluded in every given neutrosophic SuperHyperMatching.

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet

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of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

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$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
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is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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Thus the non-obvious neutrosophic SuperHyperMatching,

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Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is the neutrosophic SuperHyperSet, not:

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG:(V,E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

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is only and only

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SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Thus the non-obvious neutrosophic SuperHyperMatching,

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is the neutrosophic SuperHyperSet, not:

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

- On the Figure (3), the SuperHyperNotion, namely, SuperHyperMatching, is up. E_1, E_2 and E_3 are some empty SuperHyperEdges but E_4 is a SuperHyperEdge. Thus in the terms of SuperHyperNeighbor, there's only one SuperHyperEdge, namely, E_4.

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet

of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
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$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
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Thus the non-obvious neutrosophic SuperHyperMatching,

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
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$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an neutrosophic R-SuperHyperMatching.
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Is the neutrosophic SuperHyperSet, not:

$\mathcal{C}(NSHG) = \{E_4\}$ is an neutrosophic SuperHyperMatching.
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Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG) = \{E_4\} \text{ is an neutrosophic SuperHyperMatching.}$$
$$\mathcal{C}(NSHG) = z \text{ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.}$$
$$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\} \text{ is an neutrosophic R-SuperHyperMatching.}$$
$$\mathcal{C}(NSHG) = z^3 \text{ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.}$$

- On the Figure (4), the SuperHyperNotion, namely, a SuperHyperMatching, is up. There's no empty SuperHyperEdge but E_3 are a loop SuperHyperEdge on $\{F\}$, and there are some SuperHyperEdges, namely, E_1 on $\{H, V_1, V_3\}$, alongside E_2 on $\{O, H, V_4, V_3\}$ and E_4, E_5 on $\{N, V_1, V_2, V_3, F\}$.

$$\mathcal{C}(NSHG) = \{E_4, E_2\} \text{ is an neutrosophic SuperHyperMatching.}$$
$$\mathcal{C}(NSHG) = \{E_5, E_2\} \text{ is an neutrosophic SuperHyperMatching.}$$
$$\mathcal{C}(NSHG) = 2z^2 \text{ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.}$$
$$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\} \text{ is an neutrosophic R-SuperHyperMatching.}$$
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The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG) = \{E_4, E_2\} \text{ is an neutrosophic SuperHyperMatching.}$$
$$\mathcal{C}(NSHG) = \{E_5, E_2\} \text{ is an neutrosophic SuperHyperMatching.}$$
$$\mathcal{C}(NSHG) = 2z^2 \text{ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.}$$
$$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\} \text{ is an neutrosophic R-SuperHyperMatching.}$$
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is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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$$\mathcal{C}(NSHG) = \{E_5, E_2\} \text{ is an neutrosophic SuperHyperMatching.}$$
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$$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\} \text{ is an neutrosophic R-SuperHyperMatching.}$$
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is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with

the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4, E_2\}$ is an neutrosophic SuperHyperMatching.
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$\mathcal{C}(NSHG) = z^4$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4, E_2\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = \{E_5, E_2\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = 2z^2$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^4$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4, E_2\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = \{E_5, E_2\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = 2z^2$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\}$ is an neutrosophic R-SuperHyperMatching.
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Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$\mathcal{C}(NSHG) = \{E_4, E_2\}$ is an neutrosophic SuperHyperMatching.
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$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^4$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Thus the non-obvious neutrosophic SuperHyperMatching,

$\mathcal{C}(NSHG) = \{E_4, E_2\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = \{E_5, E_2\}$ is an neutrosophic SuperHyperMatching.
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$\mathcal{C}(NSHG) = z^4$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$\mathcal{C}(NSHG) = \{E_4, E_2\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = \{E_5, E_2\}$ is an neutrosophic SuperHyperMatching.
$\mathcal{C}(NSHG) = 2z^2$ is an neutrosophic SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\}$ is an neutrosophic R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^4$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Is the neutrosophic SuperHyperSet, not:

$\mathcal{C}(NSHG) = \{E_4, E_2\}$ is an neutrosophic SuperHyperMatching.
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$\mathcal{C}(NSHG) = z^4$ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

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amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

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$$\mathcal{C}(NSHG) = \{E_4, E_2\} \text{ is an neutrosophic SuperHyperMatching.}$$
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$$\mathcal{C}(NSHG) = \{V_1, V_2, V_3, V_4\} \text{ is an neutrosophic R-SuperHyperMatching.}$$
$$\mathcal{C}(NSHG) = z^4 \text{ is an neutrosophic R-SuperHyperMatching SuperHyperPolynomial.}$$

- On the Figure (5), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching.

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching}} = \{V_1, V_2, V_3, V_4, V_5\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

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is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
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$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching}} = \{V_1, V_2, V_3, V_4, V_5\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

Doesn't have less than same SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching}} = \{V_1, V_2, V_3, V_4, V_5\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

Is the obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
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$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

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$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
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$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

Thus the obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
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$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, is:

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching}} = \{V_1, V_2, V_3, V_4, V_5\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

Is the neutrosophic SuperHyperSet, is:

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching}} = \{V_1, V_2, V_3, V_4, V_5\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching}} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-SuperHyperMatching SuperHyperPolynomial}} = 4z^1.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching}} = \{V_1, V_2, V_3, V_4, V_5\}.$$
$$\mathcal{C}(NSHG)_{\text{neutrosophic Quasi-R-SuperHyperMatching SuperHyperPolynomial}} = 2z^5.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ is mentioned as the SuperHyperModel $ESHG : (V, E)$ in the Figure (5).

- On the Figure (6), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge.

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 5z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

- On the Figure (7), the SuperHyperNotion, namely, SuperHyperMatching, is up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic

SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 2z^7 + z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 3z^{14}.$$

- On the Figure (8), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ of dense SuperHyperModel as the Figure (8).

- On the Figure (9), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching.

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 3z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 3z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 3z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 3z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
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Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the

neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
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Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

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Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 3z^{11}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

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Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = 3z^{11}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{22}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ of highly-embedding-connected SuperHyperModel as the Figure (9).

- On the Figure (10), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{14}.$$
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Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are <u>not</u> only **<u>two</u>** neutrosophic SuperHyperVertices **<u>inside</u>** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **<u>includes</u>** only **<u>two</u>** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.$$

Doesn't have less than three SuperHyperVertices **<u>inside</u>** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **<u>is</u>** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=15}^{17}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.$$
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Thus the non-obvious neutrosophic SuperHyperMatching,

$$\begin{aligned}
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&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{14}.
\end{aligned}$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\begin{aligned}
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&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = +z^3.\\
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\end{aligned}$$

Is the neutrosophic SuperHyperSet, not:

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\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

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amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

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is only and only

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\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ of dense SuperHyperModel as the Figure (10).

- On the Figure (11), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_6, E_7, E_8\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3 + z^2.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^6.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 2z^6.$$

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Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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Is the neutrosophic SuperHyperSet, not:

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Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=2}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^5.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{10}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{10}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=2}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^5.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{10}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{10}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=2}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^5.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{10}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{10}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=2}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^5.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{10}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_i\}_{i=2}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^5.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{10}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^{10}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.

- On the Figure (13), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.\\
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_6, E_7, E_8\}.\\
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3 + z^2.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 2z^6.
\end{aligned}$$

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$$\begin{aligned}
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&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3 + z^2.\\
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&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 2z^6.
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Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.\\
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&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 2z^6.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.\\
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Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

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Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 2z^6.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_6, E_7, E_8\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3 + z^2.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 2z^6.$$

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Is the neutrosophic SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.\\
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&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3 + z^2.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.\\
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\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_1, E_3\}.\\
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&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3 + z^2.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = 2z^6.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.

- On the Figure (14), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_1\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_2\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_1\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_2\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with

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the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_1\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_2\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.
\end{aligned}$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
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Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

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&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
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Thus the non-obvious neutrosophic SuperHyperMatching,

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&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.
\end{aligned}$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_1\}.\\
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&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.
\end{aligned}$$

Is the neutrosophic SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_1\}.\\
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&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.\\
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Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

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\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's noted that this neutrosophic SuperHyperGraph $ESHG : (V, E)$ is an neutrosophic graph $G : (V, E)$ thus the notions in both settings are coincided.

- On the Figure (15), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

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$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$

Is the neutrosophic SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^6.
\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicSuperHyperMatchingSuperHyperPolynomial} = z^3.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatching} = \{V_i\}_{i=1}^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-SuperHyperMatchingSuperHyperPolynomial} = z^6.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ as Linearly-Connected SuperHyperModel On the Figure (15).

- On the Figure (16), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
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Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.
\end{aligned}$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.
\end{aligned}$$

Is the neutrosophic SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.
\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.

- On the Figure (17), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

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$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.$$
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Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{15}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ as Linearly-over-packed SuperHyperModel is featured On the Figure (17).

- On the Figure (18), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

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$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^3.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^3.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the

neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{3}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
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$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{3}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.

- On the Figure (19), the SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

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is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{12}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.

- On the Figure (20), the SuperHyperNotion, namely, SuperHyperMatching, is up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^{6}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the

neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

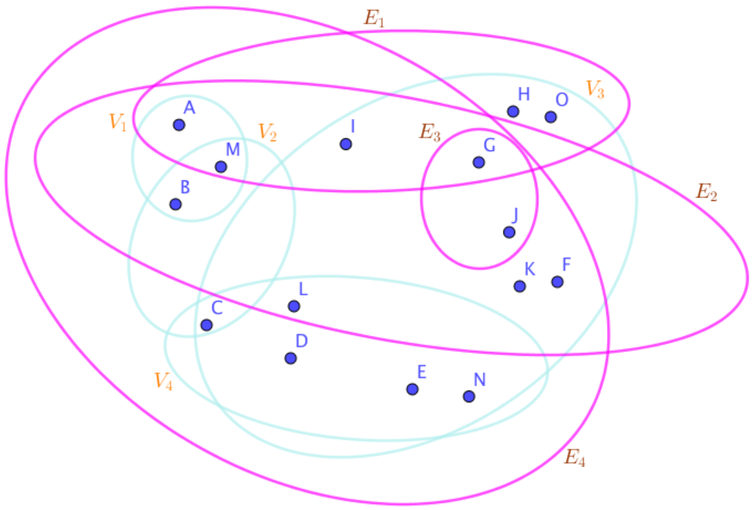

Figure 1. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

Is the neutrosophic SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.
\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} = \{E_6\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.

Proposition 6. *Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,*

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

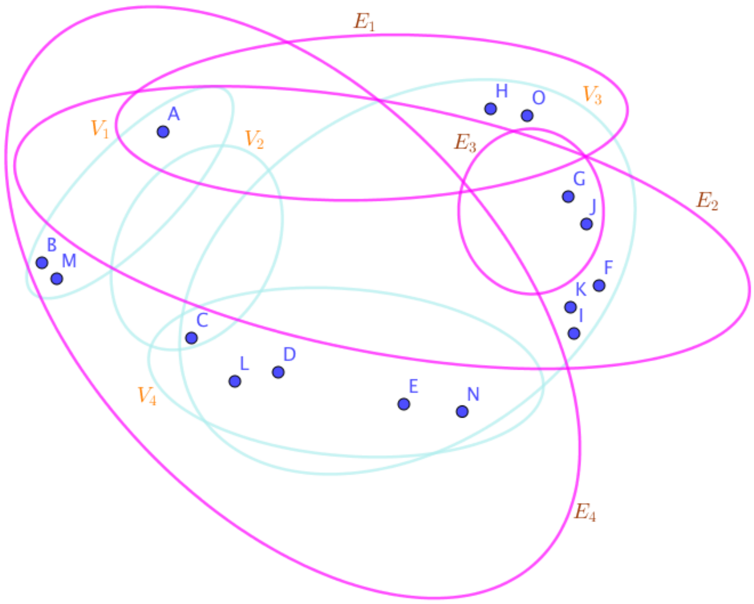

Figure 2. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

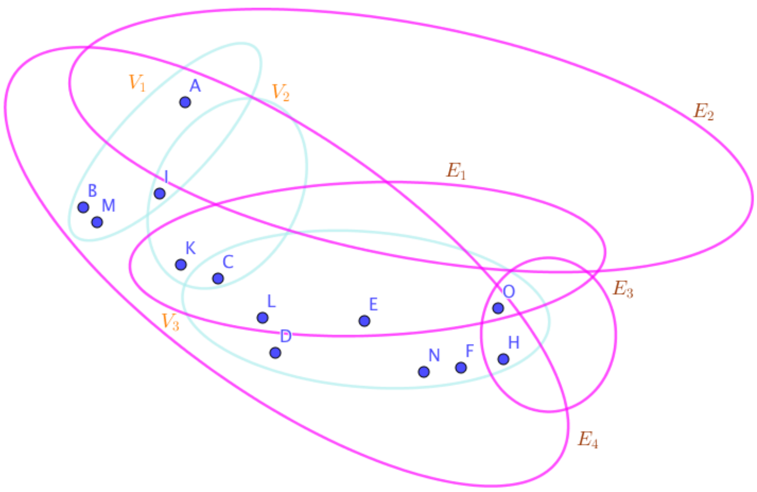

Figure 3. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

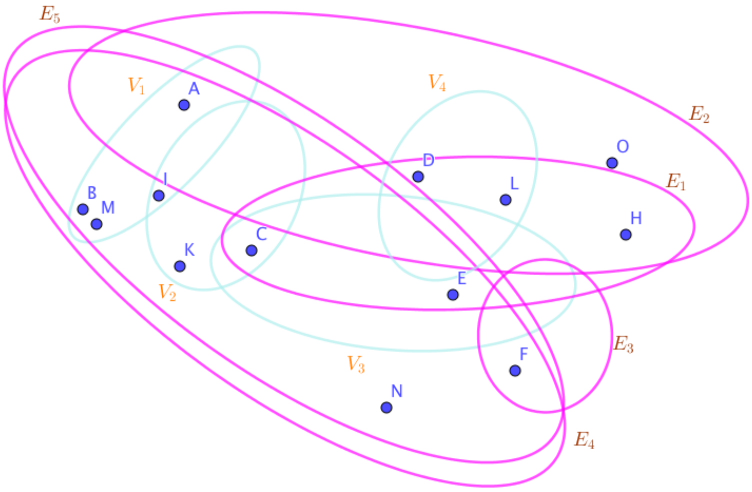

Figure 4. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

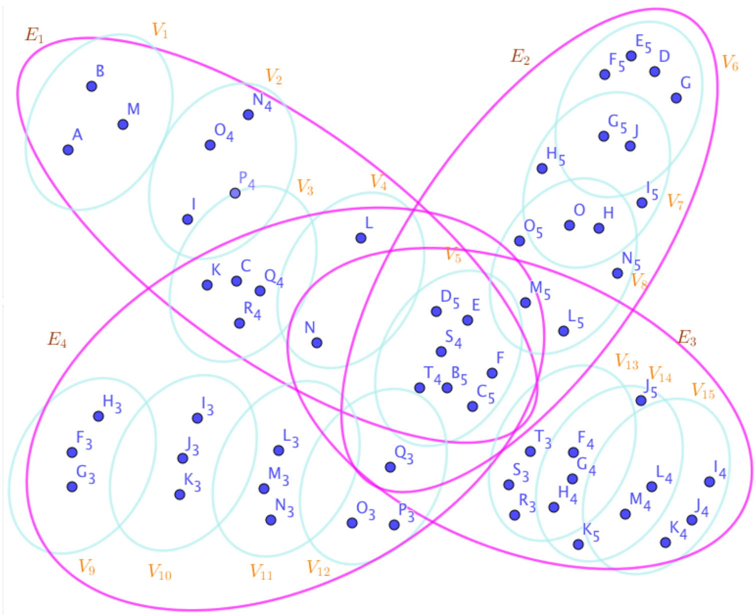

Figure 5. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

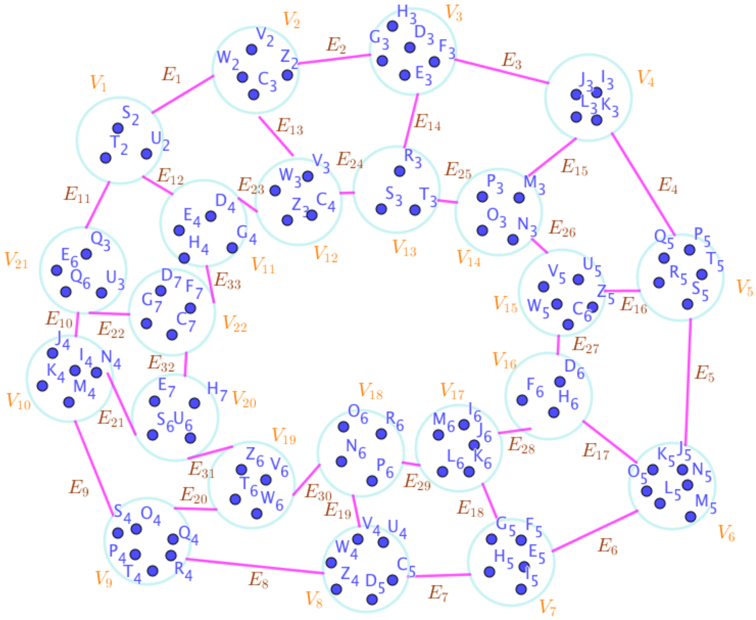

Figure 6. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

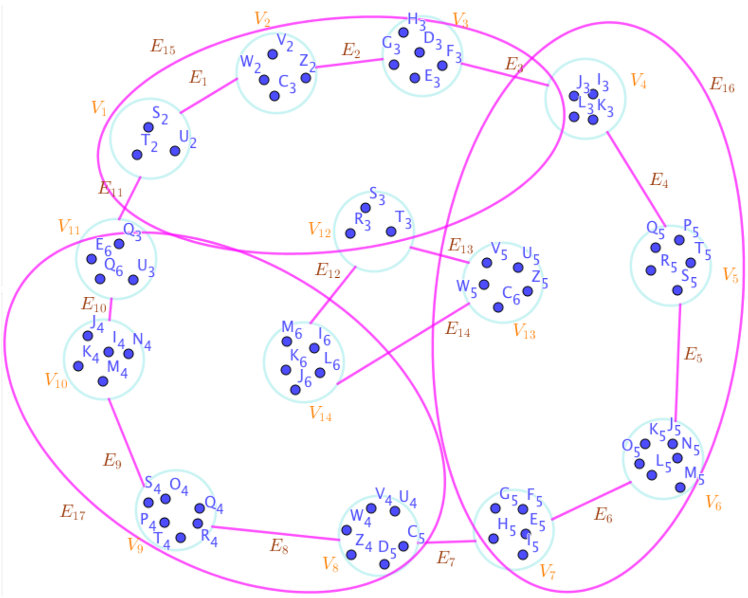

Figure 7. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

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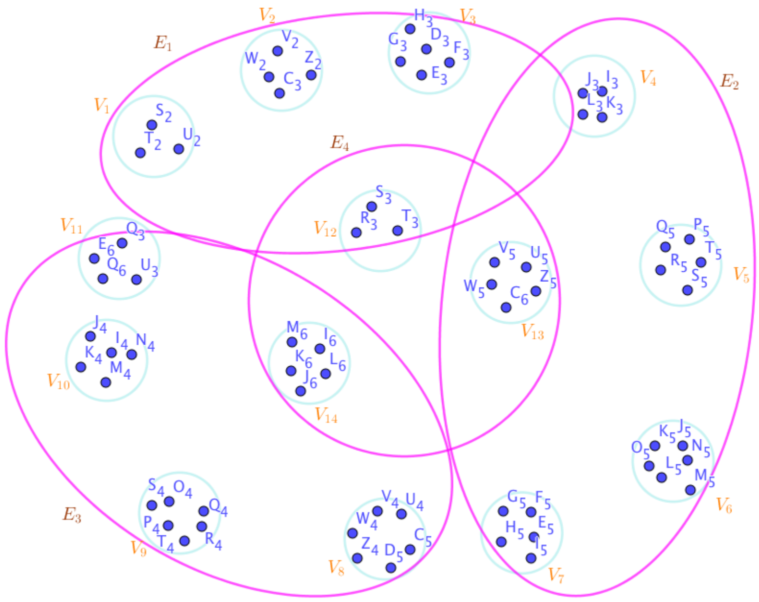

Figure 8. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

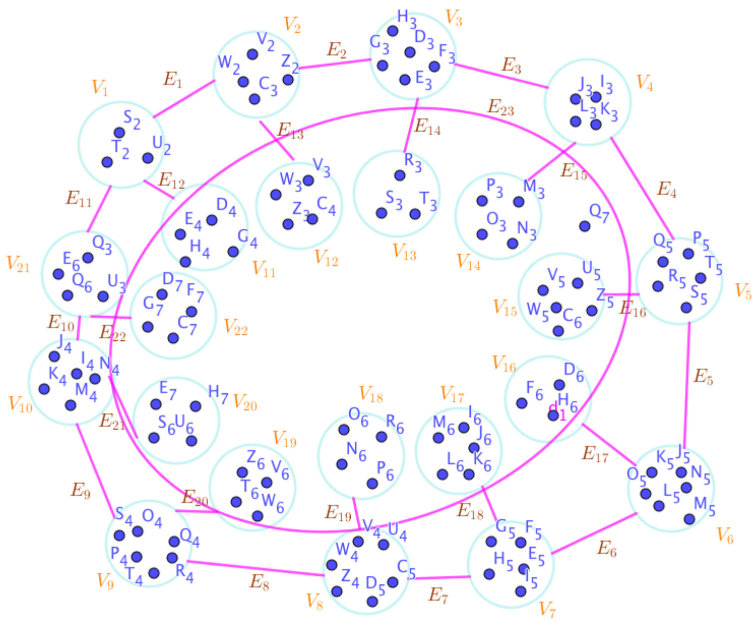

Figure 9. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

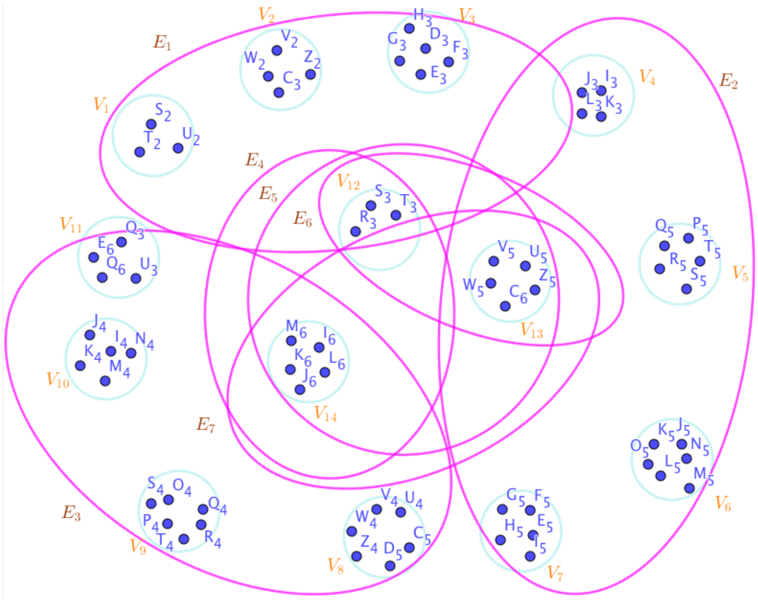

Figure 10. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

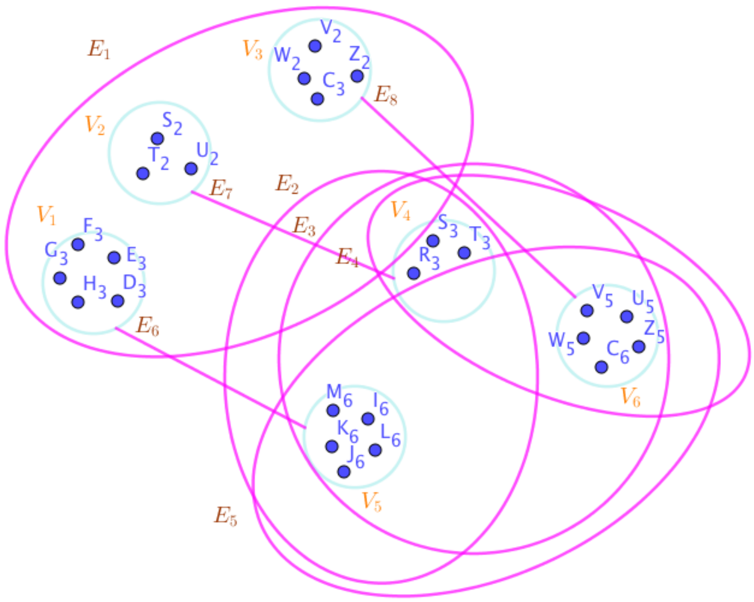

Figure 11. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

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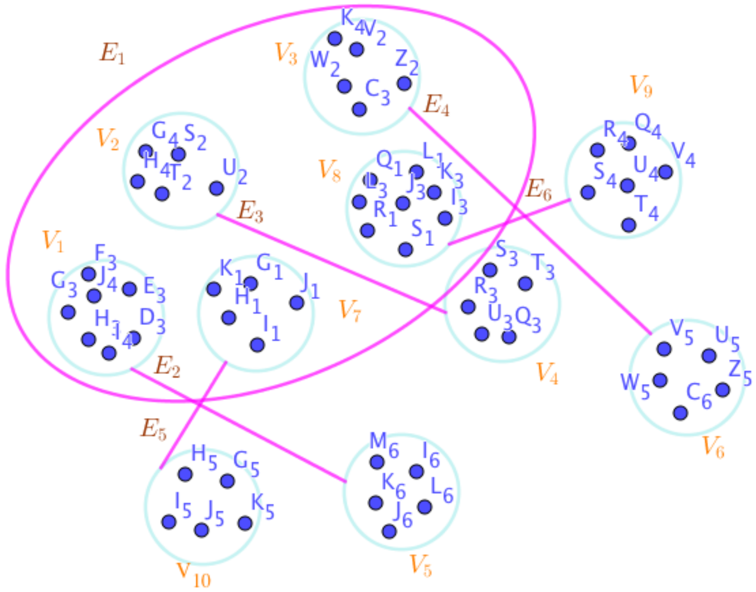

Figure 12. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

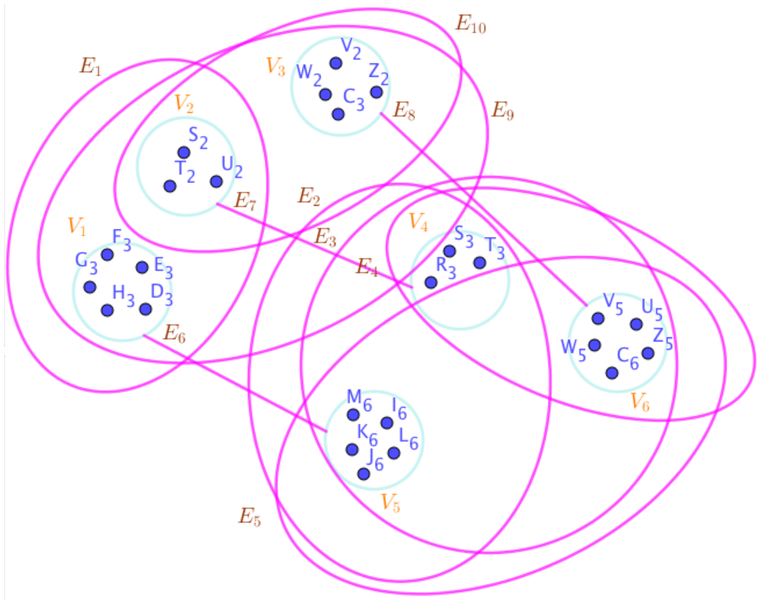

Figure 13. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

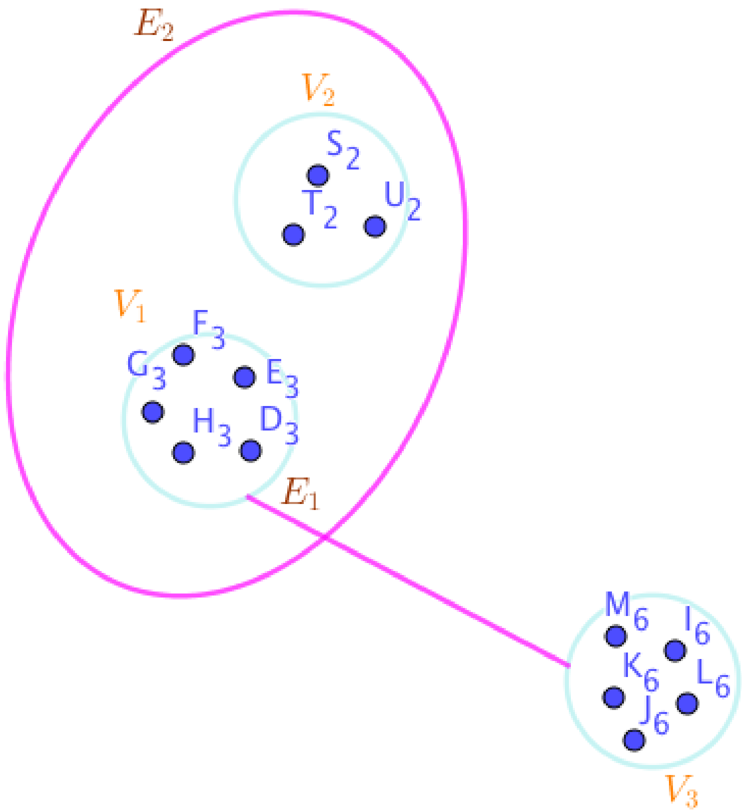

Figure 14. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

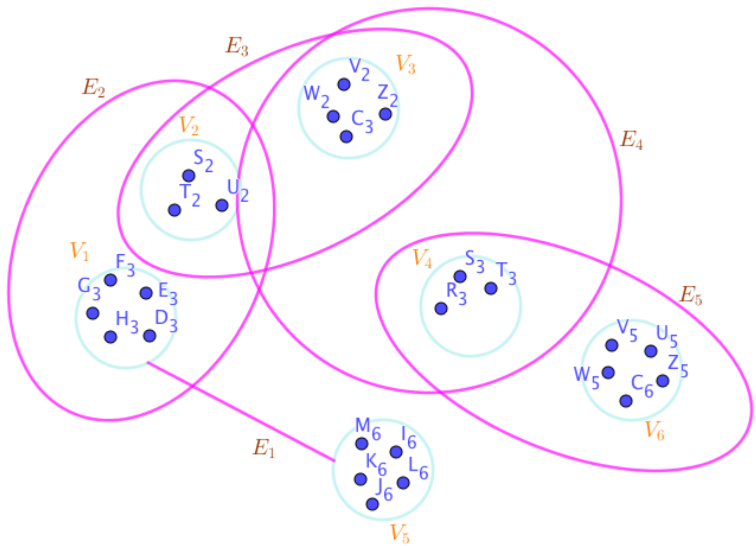

Figure 15. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

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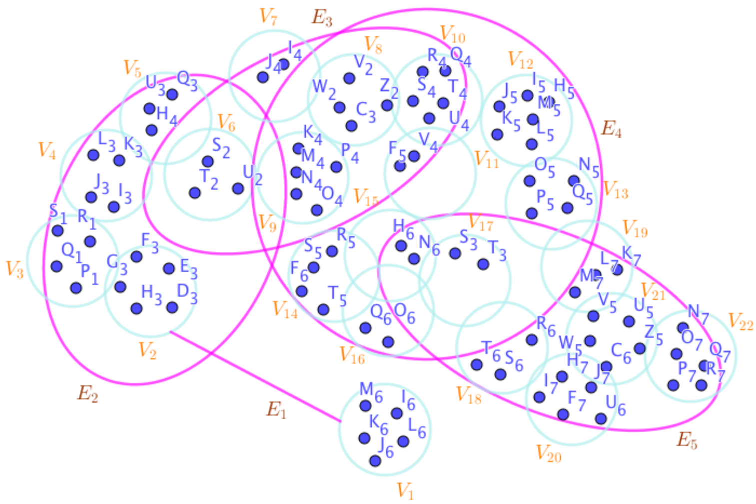

Figure 16. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

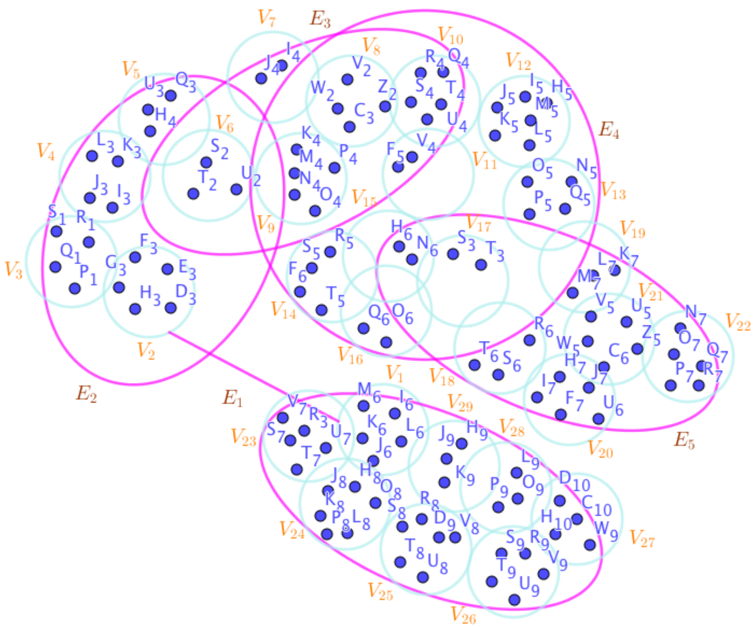

Figure 17. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

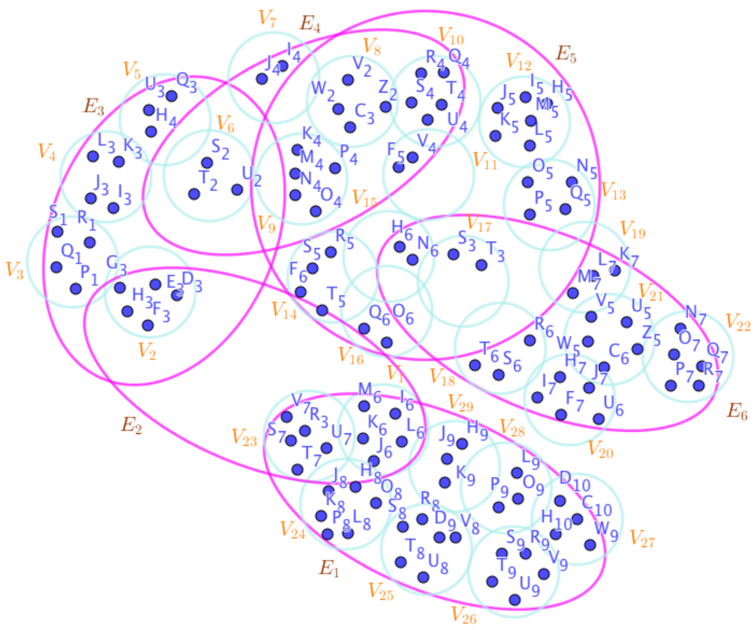

Figure 18. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

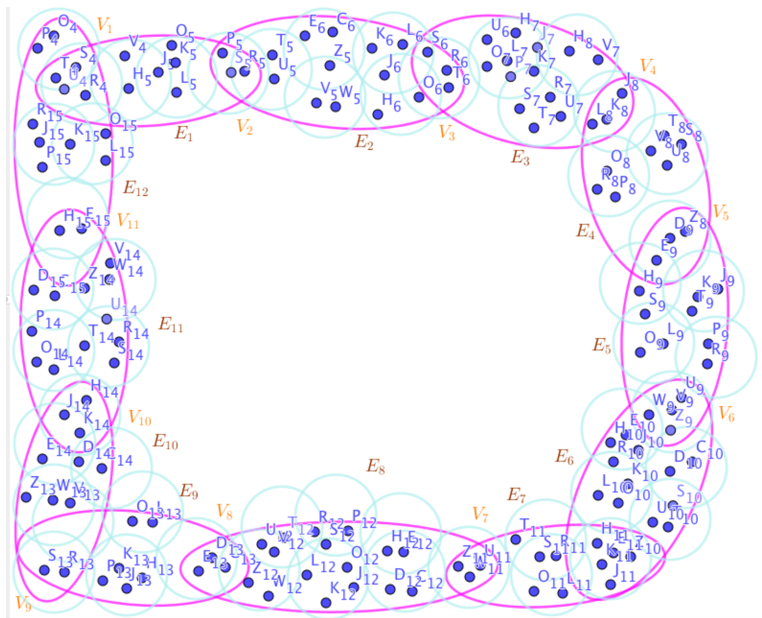

Figure 19. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

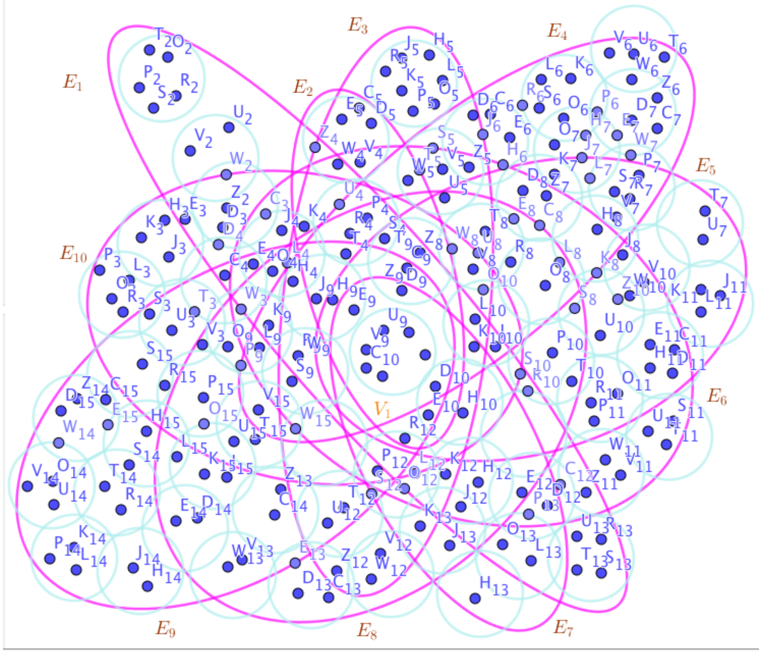

Figure 20. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5).

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Proof. Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. The SuperHyperSet of the SuperHyperVertices $V \setminus V \setminus \{z\}$ isn't a quasi-R-SuperHyperMatching since neither amount of neutrosophic SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the neutrosophic number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

This neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices has the eligibilities to propose property such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices but the maximum neutrosophic cardinality indicates that these neutrosophic type-SuperHyperSets couldn't give us the neutrosophic lower bound in the term of neutrosophic sharpness. In other words, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices is free-quasi-triangle and it doesn't make a contradiction to the supposition on the connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Thus the minimum case never happens in the generality of the connected loopless neutrosophic SuperHyperGraphs. Thus if we assume in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a quasi-R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a quasi-R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Then we've lost some connected loopless neutrosophic SuperHyperClasses of the connected loopless neutrosophic SuperHyperGraphs titled free-triangle, on-triangle, and their quasi-types but the SuperHyperStable is only up in this quasi-R-SuperHyperMatching. It's the contradiction to that fact on the generality. There are some counterexamples to deny this statement. One of them comes from the setting of the graph titled path and cycle as the counterexamples-classes or reversely direction star as the examples-classes, are well-known classes in that setting and they could be considered as the examples-classes and counterexamples-classes for the tight bound of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Let $V \setminus V \setminus \{z\}$ in mind. There's no necessity on the SuperHyperEdge since we need at least two SuperHyperVertices to form a SuperHyperEdge. It doesn't withdraw the principles of the main definition since there's no condition to be satisfied but the condition is on the existence of the SuperHyperEdge instead of acting on the SuperHyperVertices. In other words, if there's a SuperHyperEdge, then the neutrosophic SuperHyperSet has the necessary condition for the intended definition to be applied. Thus the $V \setminus V \setminus \{z\}$ is withdrawn not by the conditions of the main definition but by the necessity of the pre-condition on the usage of the main definition.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by

neutrosophic SuperHyperMatching is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

□

Proposition 7. *Assume a simple neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then the neutrosophic number of R-SuperHyperMatching has, the least cardinality, the lower sharp bound for cardinality, is the neutrosophic cardinality of*

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

If there's a R-SuperHyperMatching with the least cardinality, the lower sharp bound for cardinality.

Proof. The neutrosophic structure of the neutrosophic R-SuperHyperMatching decorates the neutrosophic SuperHyperVertices don't have received any neutrosophic connections so as this neutrosophic style implies different versions of neutrosophic SuperHyperEdges with the maximum neutrosophic cardinality in the terms of neutrosophic SuperHyperVertices are spotlight. The lower neutrosophic bound is to have the maximum neutrosophic groups of neutrosophic SuperHyperVertices have perfect neutrosophic connections inside each of SuperHyperEdges and the outside of this neutrosophic SuperHyperSet doesn't matter but regarding the connectedness of the used neutrosophic SuperHyperGraph arising from its neutrosophic properties taken from the fact that it's simple. If there's no more than one neutrosophic SuperHyperVertex in the targeted neutrosophic SuperHyperSet, then there's no neutrosophic connection. Furthermore, the neutrosophic existence of one neutrosophic SuperHyperVertex has no neutrosophic effect to talk about the neutrosophic R-SuperHyperMatching. Since at least two neutrosophic SuperHyperVertices involve to make a title in the neutrosophic background of the neutrosophic SuperHyperGraph. The neutrosophic SuperHyperGraph is obvious if it has no neutrosophic SuperHyperEdge but at least two neutrosophic SuperHyperVertices make the neutrosophic version of neutrosophic SuperHyperEdge. Thus in the neutrosophic setting of non-obvious neutrosophic SuperHyperGraph, there are at least one neutrosophic SuperHyperEdge. It's necessary to mention that the word "Simple" is used as neutrosophic adjective for the initial neutrosophic SuperHyperGraph, induces there's no neutrosophic appearance of the loop neutrosophic version of the neutrosophic SuperHyperEdge and this neutrosophic SuperHyperGraph is said to be loopless. The neutrosophic adjective "loop" on the basic neutrosophic framework engages one neutrosophic SuperHyperVertex but it never happens in this neutrosophic setting. With these neutrosophic bases, on a neutrosophic SuperHyperGraph, there's at least one neutrosophic SuperHyperEdge thus there's at least a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality of a neutrosophic SuperHyperEdge. Thus, a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality at least a neutrosophic SuperHyperEdge. Assume a neutrosophic SuperHyperSet $V \setminus V \setminus \{z\}$. This neutrosophic SuperHyperSet isn't a neutrosophic R-SuperHyperMatching since either the neutrosophic SuperHyperGraph is an obvious neutrosophic SuperHyperModel thus it never happens since there's no neutrosophic usage of this neutrosophic framework and even more there's no neutrosophic connection inside or the neutrosophic SuperHyperGraph isn't obvious and as its consequences, there's a neutrosophic contradiction with the term "neutrosophic R-SuperHyperMatching" since the maximum neutrosophic cardinality never happens for this neutrosophic style of the neutrosophic SuperHyperSet and beyond that there's no neutrosophic connection inside as mentioned in first neutrosophic case in the forms of drawback for this selected neutrosophic SuperHyperSet. Let

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Comes up. This neutrosophic case implies having the neutrosophic style of on-quasi-triangle neutrosophic style on the every neutrosophic elements of this neutrosophic SuperHyperSet. Precisely, the neutrosophic R-SuperHyperMatching is the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that some neutrosophic amount of the neutrosophic SuperHyperVertices are on-quasi-triangle neutrosophic style. The neutrosophic cardinality of the v SuperHypeSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Is the maximum in comparison to the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But the lower neutrosophic bound is up. Thus the minimum neutrosophic cardinality of the maximum neutrosophic cardinality ends up the neutrosophic discussion. The first neutrosophic term refers to the neutrosophic setting of the neutrosophic SuperHyperGraph but this key point is enough since there's a neutrosophic SuperHyperClass of a neutrosophic SuperHyperGraph has no on-quasi-triangle neutrosophic style amid some amount of its neutrosophic SuperHyperVertices. This neutrosophic setting of the neutrosophic SuperHyperModel proposes a neutrosophic SuperHyperSet has only some amount neutrosophic SuperHyperVertices from one neutrosophic SuperHyperEdge such that there's no neutrosophic amount of neutrosophic SuperHyperEdges more than one involving these some amount of these neutrosophic SuperHyperVertices. The neutrosophic cardinality of this neutrosophic

SuperHyperSet is the maximum and the neutrosophic case is occurred in the minimum neutrosophic situation. To sum them up, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Has the maximum neutrosophic cardinality such that

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Contains some neutrosophic SuperHyperVertices such that there's distinct-covers-order-amount neutrosophic SuperHyperEdges for amount of neutrosophic SuperHyperVertices taken from the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

It means that the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a neutrosophic R-SuperHyperMatching for the neutrosophic SuperHyperGraph as used neutrosophic background in the neutrosophic terms of worst neutrosophic case and the common theme of the lower neutrosophic bound occurred in the specific neutrosophic SuperHyperClasses of the neutrosophic SuperHyperGraphs which are neutrosophic free-quasi-triangle.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet

includes only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a simple neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then the neutrosophic number of R-SuperHyperMatching has, the least cardinality, the lower sharp bound for cardinality, is the neutrosophic cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

If there's a R-SuperHyperMatching with the least cardinality, the lower sharp bound for cardinality. □

Proposition 8. *Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least*

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.

Proof. Assume a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic number of the neutrosophic SuperHyperVertices. Then every neutrosophic SuperHyperVertex has at least no neutrosophic SuperHyperEdge with others in common. Thus those neutrosophic SuperHyperVertices have the eligibles to be contained in a neutrosophic R-SuperHyperMatching. Those neutrosophic SuperHyperVertices are potentially included in a neutrosophic style-R-SuperHyperMatching. Formally, consider

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

Are the neutrosophic SuperHyperVertices of a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus

$$Z_i \sim Z_j,\ i \neq j,\ i, j = 1, 2, \ldots, z.$$

where the $\sim$ isn't an equivalence relation but only the symmetric relation on the neutrosophic SuperHyperVertices of the neutrosophic SuperHyperGraph. The formal definition is as follows.

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z$$

if and only if Z_i and Z_j are the neutrosophic SuperHyperVertices and there's only and only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ between the neutrosophic SuperHyperVertices Z_i and Z_j. The other definition for the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ in the terms of neutrosophic R-SuperHyperMatching is

$$\{a_E, b_E, c_E, \ldots, z_E\}.$$

This definition coincides with the definition of the neutrosophic R-SuperHyperMatching but with slightly differences in the maximum neutrosophic cardinality amid those neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperVertices. Thus the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$\max_z |\{Z_1, Z_2, \ldots, Z_z \mid Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}|_{\text{neutrosophic cardinality}},$$

and

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E| = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

is formalized with mathematical literatures on the neutrosophic R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the neutrosophic SuperHyperVertices belong to the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus,

$$E = \{Z_1, Z_2, \ldots, Z_z \mid Z_i \overset{E}{\sim} Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}.$$

Or

$$\{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E| = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

But with the slightly differences,

$$\text{neutrosophic R-SuperHyperMatching} = \{Z_1, Z_2, \ldots, Z_z \mid \forall i \neq j,\ i,j = 1,2,\ldots,z,\ \exists E_x,\ Z_i \overset{E_x}{\sim} Z_j,\}.$$

$$\text{neutrosophic R-SuperHyperMatching} = V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E| = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

Thus $E \in E_{ESHG:(V,E)}$ is a neutrosophic quasi-R-SuperHyperMatching where $E \in E_{ESHG:(V,E)}$ is fixed that means $E_x = E \in E_{ESHG:(V,E)}$. for all neutrosophic intended SuperHyperVertices but in a neutrosophic SuperHyperMatching, $E_x = E \in E_{ESHG:(V,E)}$ could be different and it's not unique. To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words,

the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E\in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E\in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E\in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E\in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E\in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E\in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E\in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E\in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E\in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E\in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E\in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E\in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E\in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E\in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching. □

Proposition 9. *Assume a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.*

Proof. The obvious SuperHyperGraph has no neutrosophic SuperHyperEdges. But the non-obvious neutrosophic SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the neutrosophic optimal SuperHyperObject. It specially delivers some remarks on the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that there's distinct amount of neutrosophic SuperHyperEdges for distinct amount of neutrosophic SuperHyperVertices up to all taken from that neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices but this neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices is either has the maximum neutrosophic SuperHyperCardinality or it doesn't have maximum neutrosophic SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one neutrosophic SuperHyperEdge containing at least all neutrosophic SuperHyperVertices. Thus it forms a neutrosophic quasi-R-SuperHyperMatching where the neutrosophic completion of the neutrosophic incidence is up in that. Thus it's, literarily, a neutrosophic embedded R-SuperHyperMatching. The SuperHyperNotions of embedded SuperHyperSet and quasi-SuperHyperSet coincide. In the original setting, these types of SuperHyperSets only don't satisfy on the maximum SuperHyperCardinality. Thus the embedded setting is elected such that those SuperHyperSets have the maximum neutrosophic SuperHyperCardinality and they're neutrosophic SuperHyperOptimal. The less than two distinct types of neutrosophic SuperHyperVertices are included in the minimum neutrosophic style of the embedded neutrosophic R-SuperHyperMatching. The interior types of the neutrosophic SuperHyperVertices are deciders. Since the neutrosophic number of SuperHyperNeighbors are only affected by the interior neutrosophic SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the neutrosophic SuperHyperSet for any distinct types of neutrosophic SuperHyperVertices pose the neutrosophic R-SuperHyperMatching. Thus

neutrosophic exterior SuperHyperVertices could be used only in one neutrosophic SuperHyperEdge and in neutrosophic SuperHyperRelation with the interior neutrosophic SuperHyperVertices in that neutrosophic SuperHyperEdge. In the embedded neutrosophic SuperHyperMatching, there's the usage of exterior neutrosophic SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One neutrosophic SuperHyperVertex has no connection, inside. Thus, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the neutrosophic R-SuperHyperMatching. The neutrosophic R-SuperHyperMatching with the exclusion of the exclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge and with other terms, the neutrosophic R-SuperHyperMatching with the inclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge, is a neutrosophic quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up.
The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. □

Proposition 10. *Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.*

Proof. The main definition of the neutrosophic R-SuperHyperMatching has two titles. a neutrosophic quasi-R-SuperHyperMatching and its corresponded quasi-maximum neutrosophic R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any neutrosophic number, there's a neutrosophic quasi-R-SuperHyperMatching with that quasi-maximum neutrosophic SuperHyperCardinality in the terms of the embedded neutrosophic SuperHyperGraph. If there's an embedded neutrosophic SuperHyperGraph, then the neutrosophic quasi-SuperHyperNotions lead us to take the collection of all the neutrosophic quasi-R-SuperHyperMatchings for all neutrosophic numbers less than its neutrosophic corresponded maximum number. The essence of the neutrosophic SuperHyperMatching ends up but this essence starts up in the terms of the neutrosophic quasi-R-SuperHyperMatching, again and more in the operations of collecting all the neutrosophic quasi-R-SuperHyperMatchings acted on the all possible used formations of the neutrosophic SuperHyperGraph to achieve one neutrosophic number. This neutrosophic number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings.

Let $z_{\text{neutrosophic Number}}$, $S_{\text{neutrosophic SuperHyperSet}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperSet and a neutrosophic SuperHyperMatching. Then

$$[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}}\}.$$

As its consequences, the formal definition of the neutrosophic SuperHyperMatching is re-formalized and redefined as follows.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}}\}.$$

To get more precise perceptions, the follow-up expressions propose another formal technical definition for the neutrosophic SuperHyperMatching.

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

In more concise and more convenient ways, the modified definition for the neutrosophic SuperHyperMatching poses the upcoming expressions.

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

To translate the statement to this mathematical literature, the formulae will be revised.

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

And then,

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}$$

To get more visions in the closer look-up, there's an overall overlook.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}$$

Now, the extension of these types of approaches is up. Since the new term, "neutrosophic SuperHyperNeighborhood", could be redefined as the collection of the neutrosophic SuperHyperVertices such that any amount of its neutrosophic SuperHyperVertices are incident to a neutrosophic SuperHyperEdge. It's, literarily, another name for "neutrosophic Quasi-SuperHyperMatching" but, precisely, it's the generalization of "neutrosophic Quasi-SuperHyperMatching" since "neutrosophic Quasi-SuperHyperMatching" happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and background but "neutrosophic SuperHyperNeighborhood" may not happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and preliminarily background since there are some ambiguities about the neutrosophic SuperHyperCardinality arise from it. To get orderly keywords, the terms, "neutrosophic SuperHyperNeighborhood", "neutrosophic Quasi-SuperHyperMatching", and "neutrosophic SuperHyperMatching" are up.

Thus, let $z_{\text{neutrosophic Number}}, N_{\text{neutrosophic SuperHyperNeighborhood}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperNeighborhood and a neutrosophic SuperHyperMatching and the new terms are up.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

And with go back to initial structure,

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by

neutrosophic SuperHyperMatching is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them. □

Proposition 11. *Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.*

Proof. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Let a neutrosophic SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some neutrosophic SuperHyperVertices r. Consider all neutrosophic numbers of those neutrosophic SuperHyperVertices from that neutrosophic SuperHyperEdge excluding excluding more than r distinct neutrosophic SuperHyperVertices, exclude to any given neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices. Consider there's

a neutrosophic R-SuperHyperMatching with the least cardinality, the lower sharp neutrosophic bound for neutrosophic cardinality. Assume a connected neutrosophic SuperHyperGraph $ESHG:(V,E)$. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE}\setminus\{z\}$ is a neutrosophic SuperHyperSet S of the neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely but it isn't a neutrosophic R-SuperHyperMatching. Since it doesn't have **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some SuperHyperVertices uniquely. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE}\cup\{z\}$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices but it isn't a neutrosophic R-SuperHyperMatching. Since it **doesn't do** the neutrosophic procedure such that such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely [there are at least one neutrosophic SuperHyperVertex outside implying there's, sometimes in the connected neutrosophic SuperHyperGraph $ESHG:(V,E)$, a neutrosophic SuperHyperVertex, titled its neutrosophic SuperHyperNeighbor, to that neutrosophic SuperHyperVertex in the neutrosophic SuperHyperSet S so as S doesn't do "the neutrosophic procedure".]. There's only **one** neutrosophic SuperHyperVertex **outside** the intended neutrosophic SuperHyperSet, $V_{ESHE}\cup\{z\}$, in the terms of neutrosophic SuperHyperNeighborhood. Thus the obvious neutrosophic R-SuperHyperMatching, V_{ESHE} is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching, V_{ESHE}, **is** a neutrosophic SuperHyperSet, V_{ESHE}, **includes** only **all** neutrosophic SuperHyperVertices does forms any kind of neutrosophic pairs are titled neutrosophic SuperHyperNeighbors in a connected neutrosophic SuperHyperGraph $ESHG:(V,E)$. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices V_{ESHE}, is the **maximum neutrosophic SuperHyperCardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices **such that** there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely. Thus, in a connected neutrosophic SuperHyperGraph $ESHG:(V,E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up.
The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V\setminus V\setminus\{a_E,b_E,c_E,\ldots\}_{E=\{E\in E_{ESHG:(V,E)}\ |\ |E|=\max\{|E|\ |\ E\in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V\setminus V\setminus\{a_E,b_E,c_E,\ldots\}_{E=\{E\in E_{ESHG:(V,E)}\ |\ |E|=\max\{|E|\ |\ E\in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V\setminus V\setminus\{a_E,b_E,c_E,\ldots\}_{E=\{E\in E_{ESHG:(V,E)}\ |\ |E|=\max\{|E|\ |\ E\in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG:(V,E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by

neutrosophic SuperHyperMatching is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out. □

Remark 12. The words " neutrosophic SuperHyperMatching" and "neutrosophic SuperHyperDominating" both refer to the maximum neutrosophic type-style. In other words, they refer to the maximum neutrosophic SuperHyperNumber and the neutrosophic SuperHyperSet with the maximum neutrosophic SuperHyperCardinality.

Proposition 13. *Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Consider a neutrosophic SuperHyperDominating. Then a neutrosophic SuperHyperMatching has the members poses only one neutrosophic representative in a neutrosophic quasi-SuperHyperDominating.*

Proof. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Consider a neutrosophic SuperHyperDominating. By applying the Proposition (11), the neutrosophic results are up.

Thus on a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Consider a neutrosophic SuperHyperDominating. Then a neutrosophic SuperHyperMatching has the members poses only one neutrosophic representative in a neutrosophic quasi-SuperHyperDominating. □

5. Results on neutrosophic SuperHyperClasses

The previous neutrosophic approaches apply on the upcoming neutrosophic results on neutrosophic SuperHyperClasses.

Proposition 14. *Assume a connected neutrosophic SuperHyperPath $ESHP : (V, E)$. Then a neutrosophic quasi-R-SuperHyperMatching-style with the maximum neutrosophic SuperHyperCardinality is an neutrosophic SuperHyperSet of the interior neutrosophic SuperHyperVertices.*

Proposition 15. *Assume a connected neutrosophic SuperHyperPath $ESHP : (V, E)$. Then a neutrosophic quasi-R-SuperHyperMatching is a neutrosophic SuperHyperSet of the interior neutrosophic SuperHyperVertices with only no neutrosophic exceptions in the form of interior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdges not excluding only any interior neutrosophic SuperHyperVertices from the neutrosophic unique SuperHyperEdges. a neutrosophic quasi-R-SuperHyperMatching has the neutrosophic number of all the interior neutrosophic SuperHyperVertices. Also,*

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Proof. Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. The SuperHyperSet of the SuperHyperVertices $V \setminus V \setminus \{z\}$ isn't a quasi-R-SuperHyperMatching since neither amount of neutrosophic SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the neutrosophic number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

This neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices has the eligibilities to propose property such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices but the maximum neutrosophic cardinality indicates that these neutrosophic type-SuperHyperSets couldn't give us the neutrosophic lower bound in the term of neutrosophic sharpness. In other words, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices is free-quasi-triangle and it doesn't make a contradiction to the supposition on the connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Thus the minimum case never happens in the generality of the connected loopless neutrosophic SuperHyperGraphs. Thus if we assume in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a quasi-R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a quasi-R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Then we've lost some connected loopless neutrosophic SuperHyperClasses of the connected loopless neutrosophic SuperHyperGraphs titled free-triangle, on-triangle, and their quasi-types but the SuperHyperStable is only up in this quasi-R-SuperHyperMatching. It's the contradiction to that fact on the generality. There are some counterexamples to deny this statement. One of them comes from the setting of the graph titled path and cycle as the counterexamples-classes or reversely direction star as the examples-classes, are well-known classes in that setting and they could be considered as the examples-classes and counterexamples-classes for the tight bound of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Let $V \setminus V \setminus \{z\}$ in mind. There's no necessity on the SuperHyperEdge since we need at least two SuperHyperVertices to form a SuperHyperEdge. It doesn't withdraw the principles of the main definition since there's no condition to be satisfied but the condition is on the existence of the SuperHyperEdge instead of acting on the SuperHyperVertices. In other words, if there's a SuperHyperEdge, then the neutrosophic SuperHyperSet has the necessary condition for the intended definition to be applied. Thus the $V \setminus V \setminus \{z\}$ is withdrawn not by the conditions of the main definition but by the necessity of the pre-condition on the usage of the main definition.
The neutrosophic structure of the neutrosophic R-SuperHyperMatching decorates the neutrosophic SuperHyperVertices don't have received any neutrosophic connections so as this neutrosophic style implies different versions of neutrosophic SuperHyperEdges with the maximum neutrosophic cardinality in the terms of neutrosophic SuperHyperVertices are spotlight. The lower neutrosophic bound is to have the maximum neutrosophic groups of neutrosophic SuperHyperVertices have perfect neutrosophic connections inside each of SuperHyperEdges and the outside of this neutrosophic SuperHyperSet doesn't matter but regarding the connectedness of the used neutrosophic SuperHyperGraph arising from its neutrosophic properties taken from the fact that it's simple. If there's no more than one neutrosophic SuperHyperVertex in the targeted neutrosophic SuperHyperSet, then there's no neutrosophic connection. Furthermore, the neutrosophic existence of one neutrosophic SuperHyperVertex has no neutrosophic effect to talk about the neutrosophic R-SuperHyperMatching. Since at least two neutrosophic SuperHyperVertices involve to make a title in the neutrosophic background of the neutrosophic SuperHyperGraph. The neutrosophic SuperHyperGraph is obvious if it has no neutrosophic SuperHyperEdge but at least two neutrosophic SuperHyperVertices make the neutrosophic version of neutrosophic SuperHyperEdge. Thus in the neutrosophic setting of non-obvious neutrosophic SuperHyperGraph, there are at least one neutrosophic SuperHyperEdge. It's necessary to mention that the word "Simple" is used as neutrosophic adjective for the initial neutrosophic SuperHyperGraph, induces there's no neutrosophic appearance of the loop neutrosophic version of the neutrosophic SuperHyperEdge and this neutrosophic SuperHyperGraph is said to be loopless. The neutrosophic adjective "loop" on the basic neutrosophic framework engages one neutrosophic SuperHyperVertex but it never happens in this neutrosophic setting. With these neutrosophic bases, on a neutrosophic SuperHyperGraph, there's at least

one neutrosophic SuperHyperEdge thus there's at least a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality of a neutrosophic SuperHyperEdge. Thus, a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality at least a neutrosophic SuperHyperEdge. Assume a neutrosophic SuperHyperSet $V \setminus V \setminus \{z\}$. This neutrosophic SuperHyperSet isn't a neutrosophic R-SuperHyperMatching since either the neutrosophic SuperHyperGraph is an obvious neutrosophic SuperHyperModel thus it never happens since there's no neutrosophic usage of this neutrosophic framework and even more there's no neutrosophic connection inside or the neutrosophic SuperHyperGraph isn't obvious and as its consequences, there's a neutrosophic contradiction with the term "neutrosophic R-SuperHyperMatching" since the maximum neutrosophic cardinality never happens for this neutrosophic style of the neutrosophic SuperHyperSet and beyond that there's no neutrosophic connection inside as mentioned in first neutrosophic case in the forms of drawback for this selected neutrosophic SuperHyperSet. Let

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Comes up. This neutrosophic case implies having the neutrosophic style of on-quasi-triangle neutrosophic style on the every neutrosophic elements of this neutrosophic SuperHyperSet. Precisely, the neutrosophic R-SuperHyperMatching is the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that some neutrosophic amount of the neutrosophic SuperHyperVertices are on-quasi-triangle neutrosophic style. The neutrosophic cardinality of the v SuperHypeSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Is the maximum in comparison to the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But the lower neutrosophic bound is up. Thus the minimum neutrosophic cardinality of the maximum neutrosophic cardinality ends up the neutrosophic discussion. The first neutrosophic term refers to the neutrosophic setting of the neutrosophic SuperHyperGraph but this key point is enough since there's a neutrosophic SuperHyperClass of a neutrosophic SuperHyperGraph has no on-quasi-triangle neutrosophic style amid some amount of its neutrosophic SuperHyperVertices. This neutrosophic setting of the neutrosophic SuperHyperModel proposes a neutrosophic SuperHyperSet has only some amount neutrosophic SuperHyperVertices from one neutrosophic SuperHyperEdge such that there's no neutrosophic amount of neutrosophic SuperHyperEdges more than one involving these some amount of these neutrosophic SuperHyperVertices. The neutrosophic cardinality of this neutrosophic SuperHyperSet is the maximum and the neutrosophic case is occurred in the minimum neutrosophic situation. To sum them up, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Has the maximum neutrosophic cardinality such that

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Contains some neutrosophic SuperHyperVertices such that there's distinct-covers-order-amount neutrosophic SuperHyperEdges for amount of neutrosophic SuperHyperVertices taken from the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

It means that the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a neutrosophic R-SuperHyperMatching for the neutrosophic SuperHyperGraph as used neutrosophic background in the neutrosophic terms of worst neutrosophic case and the common theme of the lower neutrosophic bound occurred in the specific neutrosophic SuperHyperClasses of the neutrosophic SuperHyperGraphs which are neutrosophic free-quasi-triangle.
Assume a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic number of the neutrosophic SuperHyperVertices. Then every neutrosophic SuperHyperVertex has at least no neutrosophic SuperHyperEdge with others in common. Thus those neutrosophic SuperHyperVertices have the eligibles to be contained in a neutrosophic R-SuperHyperMatching. Those neutrosophic SuperHyperVertices are potentially included in a neutrosophic style-R-SuperHyperMatching. Formally, consider

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

Are the neutrosophic SuperHyperVertices of a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z.$$

where the $\sim$ isn't an equivalence relation but only the symmetric relation on the neutrosophic SuperHyperVertices of the neutrosophic SuperHyperGraph. The formal definition is as follows.

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z$$

if and only if Z_i and Z_j are the neutrosophic SuperHyperVertices and there's only and only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ between the neutrosophic SuperHyperVertices Z_i and Z_j. The other definition for the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ in the terms of neutrosophic R-SuperHyperMatching is

$$\{a_E, b_E, c_E, \ldots, z_E\}.$$

This definition coincides with the definition of the neutrosophic R-SuperHyperMatching but with slightly differences in the maximum neutrosophic cardinality amid those neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperVertices. Thus the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$\max_z |\{Z_1, Z_2, \ldots, Z_z \mid Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}|_{\text{neutrosophic cardinality}},$$

and

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is formalized with mathematical literatures on the neutrosophic R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the neutrosophic SuperHyperVertices belong to the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus,

$$E = \{Z_1, Z_2, \ldots, Z_z \mid Z_i \overset{E}{\sim} Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}.$$

Or

$$\{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But with the slightly differences,

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\&\{Z_1, Z_2, \ldots, Z_z \mid \forall i \neq j,\ i,j = 1,2,\ldots,z,\ \exists E_x,\ Z_i \overset{E_x}{\sim} Z_j, \}.\end{aligned}$$

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\&V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.\end{aligned}$$

Thus $E \in E_{ESHG:(V,E)}$ is a neutrosophic quasi-R-SuperHyperMatching where $E \in E_{ESHG:(V,E)}$ is fixed that means $E_x = E \in E_{ESHG:(V,E)}$. for all neutrosophic intended SuperHyperVertices but in a neutrosophic SuperHyperMatching, $E_x = E \in E_{ESHG:(V,E)}$ could be different and it's not unique. To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.

The obvious SuperHyperGraph has no neutrosophic SuperHyperEdges. But the non-obvious neutrosophic SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the neutrosophic optimal SuperHyperObject. It specially delivers some remarks on the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that there's distinct amount of neutrosophic SuperHyperEdges for distinct amount of neutrosophic SuperHyperVertices up to all taken from that neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices but this neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices is either has the maximum neutrosophic SuperHyperCardinality or it doesn't have maximum neutrosophic SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one neutrosophic SuperHyperEdge containing at least all neutrosophic SuperHyperVertices. Thus it forms a neutrosophic quasi-R-SuperHyperMatching where the neutrosophic completion of the neutrosophic incidence is up in that. Thus it's, literarily, a neutrosophic embedded R-SuperHyperMatching. The SuperHyperNotions of embedded SuperHyperSet and quasi-SuperHyperSet coincide. In the original setting, these types of SuperHyperSets only don't satisfy on the maximum SuperHyperCardinality. Thus the embedded setting is elected such that those SuperHyperSets have the maximum neutrosophic SuperHyperCardinality and they're neutrosophic SuperHyperOptimal. The less than two distinct types of neutrosophic SuperHyperVertices are included in the minimum neutrosophic style of the embedded neutrosophic R-SuperHyperMatching. The interior types of the neutrosophic SuperHyperVertices are deciders. Since the neutrosophic number of SuperHyperNeighbors are only affected by the interior neutrosophic SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the neutrosophic SuperHyperSet for any distinct types of neutrosophic SuperHyperVertices pose the neutrosophic R-SuperHyperMatching. Thus neutrosophic exterior SuperHyperVertices could be used only in one neutrosophic SuperHyperEdge and in neutrosophic SuperHyperRelation with the interior neutrosophic SuperHyperVertices

in that neutrosophic SuperHyperEdge. In the embedded neutrosophic SuperHyperMatching, there's the usage of exterior neutrosophic SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One neutrosophic SuperHyperVertex has no connection, inside. Thus, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the neutrosophic R-SuperHyperMatching. The neutrosophic R-SuperHyperMatching with the exclusion of the exclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge and with other terms, the neutrosophic R-SuperHyperMatching with the inclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge, is a neutrosophic quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.
The main definition of the neutrosophic R-SuperHyperMatching has two titles. a neutrosophic quasi-R-SuperHyperMatching and its corresponded quasi-maximum neutrosophic R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any neutrosophic number, there's a neutrosophic quasi-R-SuperHyperMatching with that quasi-maximum neutrosophic SuperHyperCardinality in the terms of the embedded neutrosophic SuperHyperGraph. If there's an embedded neutrosophic SuperHyperGraph, then the neutrosophic quasi-SuperHyperNotions lead us to take the collection of all the neutrosophic quasi-R-SuperHyperMatchings for all neutrosophic numbers less than its neutrosophic corresponded maximum number. The essence of the neutrosophic SuperHyperMatching ends up but this essence starts up in the terms of the neutrosophic quasi-R-SuperHyperMatching, again and more in the operations of collecting all the neutrosophic quasi-R-SuperHyperMatchings acted on the all possible used formations of the neutrosophic SuperHyperGraph to achieve one neutrosophic number. This neutrosophic number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{neutrosophic Number}}, S_{\text{neutrosophic SuperHyperSet}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperSet and a neutrosophic SuperHyperMatching. Then

$$\begin{aligned}
&[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

As its consequences, the formal definition of the neutrosophic SuperHyperMatching is re-formalized and redefined as follows.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

To get more precise perceptions, the follow-up expressions propose another formal technical definition for the neutrosophic SuperHyperMatching.

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =$$
$$\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid$$
$$S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}},$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= z_{\text{neutrosophic Number}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

In more concise and more convenient ways, the modified definition for the neutrosophic SuperHyperMatching poses the upcoming expressions.

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

To translate the statement to this mathematical literature, the formulae will be revised.

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

And then,

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

To get more visions in the closer look-up, there's an overall overlook.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =$$
$$\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid$$
$$S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}},$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.
\end{aligned}
$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.
\end{aligned}
$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.
\end{aligned}
$$

Now, the extension of these types of approaches is up. Since the new term, "neutrosophic SuperHyperNeighborhood", could be redefined as the collection of the neutrosophic SuperHyperVertices such that any amount of its neutrosophic SuperHyperVertices are incident to a neutrosophic SuperHyperEdge. It's, literarily, another name for "neutrosophic Quasi-SuperHyperMatching" but, precisely, it's the generalization of "neutrosophic Quasi-SuperHyperMatching" since "neutrosophic Quasi-SuperHyperMatching" happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and background but "neutrosophic SuperHyperNeighborhood" may not happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and preliminarily background since there are some ambiguities about the neutrosophic SuperHyperCardinality arise from it. To get orderly keywords, the terms, "neutrosophic SuperHyperNeighborhood", "neutrosophic Quasi-SuperHyperMatching", and "neutrosophic SuperHyperMatching" are up.
Thus, let $z_{\text{neutrosophic Number}}, N_{\text{neutrosophic SuperHyperNeighborhood}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperNeighborhood and a neutrosophic SuperHyperMatching and the new terms are up.

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \}.
\end{aligned}
$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

And with go back to initial structure,

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.$$

Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Let a neutrosophic SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some neutrosophic SuperHyperVertices r. Consider all neutrosophic numbers of those neutrosophic SuperHyperVertices from that neutrosophic SuperHyperEdge excluding excluding more than r distinct neutrosophic SuperHyperVertices, exclude to any given neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices. Consider there's a neutrosophic R-SuperHyperMatching with the least cardinality, the lower sharp neutrosophic bound for neutrosophic cardinality. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is a neutrosophic SuperHyperSet S of the neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely but it isn't a neutrosophic R-SuperHyperMatching. Since it doesn't have **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some SuperHyperVertices uniquely. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices but it isn't a neutrosophic R-SuperHyperMatching. Since it **doesn't do** the neutrosophic procedure such that such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely [there are at least one neutrosophic SuperHyperVertex outside implying there's, sometimes in the connected neutrosophic SuperHyperGraph $ESHG : (V, E)$, a neutrosophic SuperHyperVertex, titled its neutrosophic SuperHyperNeighbor, to that neutrosophic SuperHyperVertex in the neutrosophic SuperHyperSet S so as S doesn't do "the neutrosophic procedure".]. There's only **one** neutrosophic SuperHyperVertex **outside** the intended neutrosophic SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of neutrosophic SuperHyperNeighborhood. Thus the obvious neutrosophic R-SuperHyperMatching, V_{ESHE} is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching, V_{ESHE}, **is** a neutrosophic SuperHyperSet, V_{ESHE}, **includes** only **all** neutrosophic SuperHyperVertices does forms any kind of neutrosophic pairs are titled neutrosophic SuperHyperNeighbors in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices V_{ESHE}, is the **maximum neutrosophic SuperHyperCardinality** of a neutrosophic SuperHyperSet S of

neutrosophic SuperHyperVertices **such that** there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely. Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s} + bz^{t}.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet

includes only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}+bz^{t}.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}+bz^{t}.
\end{aligned}$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}+bz^{t}.
\end{aligned}$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG:(V,E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's

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an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

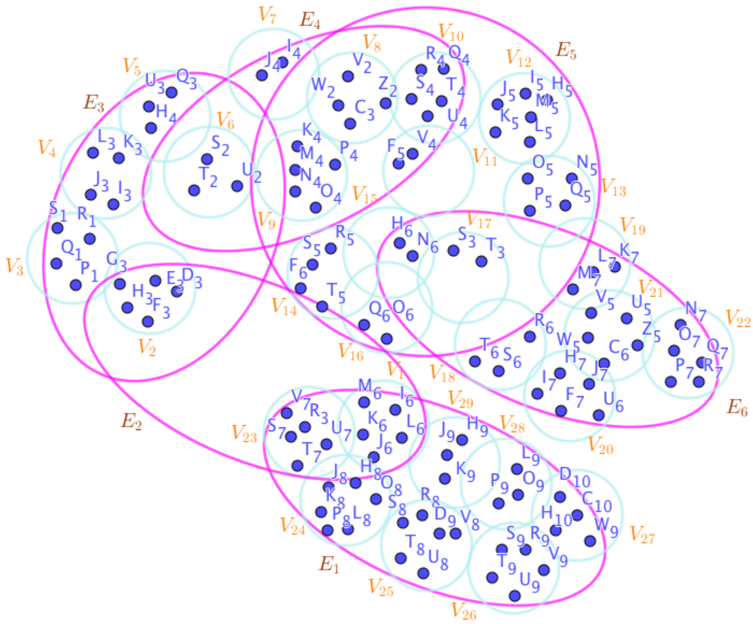

Figure 21. A neutrosophic SuperHyperPath Associated to the Notions of neutrosophic SuperHyperMatching in the Example (16).

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. □

Example 16. In the Figure (21), the connected neutrosophic SuperHyperPath $ESHP : (V, E)$, is highlighted and featured. The neutrosophic SuperHyperSet, in the neutrosophic SuperHyperModel (21), is the SuperHyperMatching.

Proposition 17. *Assume a connected neutrosophic SuperHyperCycle $ESHC : (V, E)$. Then a neutrosophic quasi-R-SuperHyperMatching is a neutrosophic SuperHyperSet of the interior neutrosophic SuperHyperVertices with only no neutrosophic exceptions on the form of interior neutrosophic SuperHyperVertices from the same neutrosophic SuperHyperNeighborhoods not excluding any neutrosophic SuperHyperVertex. a neutrosophic* *quasi-R-SuperHyperMatching has the neutrosophic half number of all the neutrosophic SuperHyperEdges in the terms of the maximum neutrosophic cardinality. Also,*

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Proof. Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. The SuperHyperSet of the SuperHyperVertices $V \setminus V \setminus \{z\}$ isn't a quasi-R-SuperHyperMatching since neither amount of neutrosophic SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the neutrosophic number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

This neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices has the eligibilities to propose property such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices but the maximum neutrosophic cardinality indicates that these neutrosophic type-SuperHyperSets couldn't give us the neutrosophic lower bound in the term of neutrosophic sharpness. In other words, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices is free-quasi-triangle and it doesn't make a contradiction to the supposition on the connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Thus the minimum case never happens in the generality of the connected loopless neutrosophic SuperHyperGraphs. Thus if we assume in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a quasi-R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a quasi-R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Then we've lost some connected loopless neutrosophic SuperHyperClasses of the connected loopless neutrosophic SuperHyperGraphs titled free-triangle, on-triangle, and their quasi-types but the SuperHyperStable is only up in this quasi-R-SuperHyperMatching. It's the contradiction to that fact on the generality. There are some counterexamples to deny this statement. One of them comes from the setting of the graph titled path and cycle as the counterexamples-classes or reversely direction star as the examples-classes, are well-known classes in that setting and they could be considered as the examples-classes and counterexamples-classes for the tight bound of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Let $V \setminus V \setminus \{z\}$ in mind. There's no necessity on the SuperHyperEdge since we need at least two SuperHyperVertices to form a SuperHyperEdge. It doesn't withdraw the principles of the main definition since there's no condition to be satisfied but the condition is on the existence of the SuperHyperEdge instead of acting on the SuperHyperVertices. In other words, if there's a SuperHyperEdge, then the neutrosophic SuperHyperSet has the necessary condition for the intended definition to be applied. Thus the $V \setminus V \setminus \{z\}$ is withdrawn not by the conditions of the main definition but by the necessity of the pre-condition on the usage of the main definition.
The neutrosophic structure of the neutrosophic R-SuperHyperMatching decorates the neutrosophic SuperHyperVertices don't have received any neutrosophic connections so as this neutrosophic style implies different versions of neutrosophic SuperHyperEdges with the maximum neutrosophic cardinality in the terms of neutrosophic SuperHyperVertices are spotlight. The lower neutrosophic bound is to have the maximum neutrosophic groups of neutrosophic SuperHyperVertices have perfect neutrosophic connections inside each of SuperHyperEdges and the outside of this neutrosophic SuperHyperSet doesn't matter but regarding the connectedness of the used neutrosophic SuperHyperGraph arising from its neutrosophic properties taken from the fact that it's simple. If there's no more than one neutrosophic SuperHyperVertex in the targeted neutrosophic SuperHyperSet, then there's no neutrosophic connection. Furthermore, the neutrosophic existence of one neutrosophic SuperHyperVertex has no neutrosophic effect to talk about the neutrosophic R-SuperHyperMatching. Since at least two neutrosophic SuperHyperVertices involve to make a title in the neutrosophic background of the neutrosophic SuperHyperGraph. The neutrosophic SuperHyperGraph is obvious if it has no neutrosophic SuperHyperEdge but at least two neutrosophic SuperHyperVertices make the neutrosophic version of neutrosophic SuperHyperEdge. Thus in the neutrosophic setting of non-obvious neutrosophic SuperHyperGraph, there are at least one neutrosophic SuperHyperEdge. It's necessary to mention that the word "Simple" is used as neutrosophic adjective for the initial neutrosophic SuperHyperGraph, induces there's no neutrosophic appearance of the loop neutrosophic version of the neutrosophic SuperHyperEdge and this neutrosophic SuperHyperGraph is said to be loopless. The neutrosophic adjective "loop" on the basic neutrosophic framework engages one neutrosophic SuperHyperVertex but it never happens in this neutrosophic setting. With these neutrosophic bases, on a neutrosophic SuperHyperGraph, there's at least one neutrosophic SuperHyperEdge thus there's at least a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality of a neutrosophic SuperHyperEdge. Thus, a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality at least a neutrosophic SuperHyperEdge. Assume a neutrosophic SuperHyperSet $V \setminus V \setminus \{z\}$. This neutrosophic SuperHyperSet isn't a neutrosophic R-SuperHyperMatching since either the neutrosophic SuperHyperGraph is an obvious neutrosophic SuperHyperModel thus it never happens since there's no neutrosophic usage of this neutrosophic framework and even more there's no neutrosophic connection inside or the neutrosophic SuperHyperGraph isn't obvious and as its consequences, there's a neutrosophic contradiction with the term "neutrosophic R-SuperHyperMatching" since the maximum neutrosophic cardinality never happens for this neutrosophic style of the neutrosophic SuperHyperSet and beyond that there's no neutrosophic connection inside as mentioned in first neutrosophic case in the forms of drawback for this selected neutrosophic SuperHyperSet. Let

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Comes up. This neutrosophic case implies having the neutrosophic style of on-quasi-triangle neutrosophic style on the every neutrosophic elements of this neutrosophic SuperHyperSet. Precisely, the neutrosophic R-SuperHyperMatching is the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that some neutrosophic amount of the neutrosophic SuperHyperVertices are on-quasi-triangle neutrosophic style. The neutrosophic cardinality of the v SuperHypeSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Is the maximum in comparison to the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But the lower neutrosophic bound is up. Thus the minimum neutrosophic cardinality of the maximum neutrosophic cardinality ends up the neutrosophic discussion. The first neutrosophic term refers to the neutrosophic setting of the neutrosophic SuperHyperGraph but this key point is enough since there's a neutrosophic SuperHyperClass of a neutrosophic SuperHyperGraph has no on-quasi-triangle neutrosophic style amid some amount of its neutrosophic SuperHyperVertices. This neutrosophic setting of the neutrosophic SuperHyperModel proposes a neutrosophic SuperHyperSet has only some amount neutrosophic SuperHyperVertices from one neutrosophic SuperHyperEdge such that there's no neutrosophic amount of neutrosophic SuperHyperEdges more than one involving these some amount of these neutrosophic SuperHyperVertices. The neutrosophic cardinality of this neutrosophic SuperHyperSet is the maximum and the neutrosophic case is occurred in the minimum neutrosophic situation. To sum them up, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Has the maximum neutrosophic cardinality such that

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Contains some neutrosophic SuperHyperVertices such that there's distinct-covers-order-amount neutrosophic SuperHyperEdges for amount of neutrosophic SuperHyperVertices taken from the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

It means that the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a neutrosophic R-SuperHyperMatching for the neutrosophic SuperHyperGraph as used neutrosophic background in the neutrosophic terms of worst neutrosophic case and the common theme of the lower neutrosophic bound occurred in the specific neutrosophic SuperHyperClasses of the neutrosophic SuperHyperGraphs which are neutrosophic free-quasi-triangle.

Assume a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic number of the neutrosophic SuperHyperVertices. Then every neutrosophic SuperHyperVertex has at least no neutrosophic SuperHyperEdge with others in common. Thus those neutrosophic SuperHyperVertices have the eligibles to be contained in a neutrosophic R-SuperHyperMatching. Those neutrosophic SuperHyperVertices are potentially included in a neutrosophic style-R-SuperHyperMatching. Formally, consider

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

Are the neutrosophic SuperHyperVertices of a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z.$$

where the $\sim$ isn't an equivalence relation but only the symmetric relation on the neutrosophic SuperHyperVertices of the neutrosophic SuperHyperGraph. The formal definition is as follows.

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z$$

if and only if Z_i and Z_j are the neutrosophic SuperHyperVertices and there's only and only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ between the neutrosophic SuperHyperVertices Z_i and Z_j. The other definition for the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ in the terms of neutrosophic R-SuperHyperMatching is

$$\{a_E, b_E, c_E, \ldots, z_E\}.$$

This definition coincides with the definition of the neutrosophic R-SuperHyperMatching but with slightly differences in the maximum neutrosophic cardinality amid those neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperVertices. Thus the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$\max_z |\{Z_1, Z_2, \ldots, Z_z \mid Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}|_{\text{neutrosophic cardinality}},$$

and

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is formalized with mathematical literatures on the neutrosophic R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the neutrosophic SuperHyperVertices belong to the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus,

$$E = \{Z_1, Z_2, \ldots, Z_z \mid Z_i \overset{E}{\sim} Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}.$$

Or

$$\{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But with the slightly differences,

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &\{Z_1, Z_2, \ldots, Z_z \mid \forall i \neq j,\ i,j = 1,2,\ldots,z,\ \exists E_x,\ Z_i \overset{E_x}{\sim} Z_j,\}.\end{aligned}$$

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.\end{aligned}$$

Thus $E \in E_{ESHG:(V,E)}$ is a neutrosophic quasi-R-SuperHyperMatching where $E \in E_{ESHG:(V,E)}$ is fixed that means $E_x = E \in E_{ESHG:(V,E)}$. for all neutrosophic intended SuperHyperVertices but in a neutrosophic SuperHyperMatching, $E_x = E \in E_{ESHG:(V,E)}$ could be different and it's not unique. To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.
The obvious SuperHyperGraph has no neutrosophic SuperHyperEdges. But the non-obvious neutrosophic SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the neutrosophic optimal SuperHyperObject. It specially delivers some remarks on the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that there's distinct amount of neutrosophic SuperHyperEdges for distinct amount of neutrosophic SuperHyperVertices up to all taken from that neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices but this neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices is either has the maximum neutrosophic SuperHyperCardinality or it doesn't have maximum neutrosophic SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one neutrosophic SuperHyperEdge containing at least all neutrosophic SuperHyperVertices. Thus it forms a neutrosophic quasi-R-SuperHyperMatching where the neutrosophic completion of the neutrosophic incidence is up in that. Thus it's, literarily, a neutrosophic embedded R-SuperHyperMatching. The SuperHyperNotions of embedded SuperHyperSet and quasi-SuperHyperSet coincide. In the original setting, these types of SuperHyperSets only don't satisfy on the maximum SuperHyperCardinality. Thus the embedded setting is elected such that those SuperHyperSets have the maximum neutrosophic SuperHyperCardinality and they're neutrosophic SuperHyperOptimal. The less than two distinct types of neutrosophic SuperHyperVertices are included in the minimum neutrosophic style of the embedded neutrosophic R-SuperHyperMatching. The interior types of the neutrosophic SuperHyperVertices are deciders. Since the neutrosophic number of SuperHyperNeighbors are only affected by the interior neutrosophic SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the neutrosophic SuperHyperSet for any distinct types of neutrosophic SuperHyperVertices pose the neutrosophic R-SuperHyperMatching. Thus neutrosophic exterior SuperHyperVertices could be used only in one neutrosophic SuperHyperEdge and in neutrosophic SuperHyperRelation with the interior neutrosophic SuperHyperVertices in that neutrosophic SuperHyperEdge. In the embedded neutrosophic SuperHyperMatching, there's the usage of exterior neutrosophic SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One neutrosophic SuperHyperVertex has no connection, inside. Thus, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the neutrosophic R-SuperHyperMatching. The neutrosophic R-SuperHyperMatching with the exclusion of the exclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge and with other terms, the neutrosophic R-SuperHyperMatching with the inclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge, is a neutrosophic quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.
The main definition of the neutrosophic R-SuperHyperMatching has two titles. a

neutrosophic quasi-R-SuperHyperMatching and its corresponded quasi-maximum neutrosophic R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any neutrosophic number, there's a neutrosophic quasi-R-SuperHyperMatching with that quasi-maximum neutrosophic SuperHyperCardinality in the terms of the embedded neutrosophic SuperHyperGraph. If there's an embedded neutrosophic SuperHyperGraph, then the neutrosophic quasi-SuperHyperNotions lead us to take the collection of all the neutrosophic quasi-R-SuperHyperMatchings for all neutrosophic numbers less than its neutrosophic corresponded maximum number. The essence of the neutrosophic SuperHyperMatching ends up but this essence starts up in the terms of the neutrosophic quasi-R-SuperHyperMatching, again and more in the operations of collecting all the neutrosophic quasi-R-SuperHyperMatchings acted on the all possible used formations of the neutrosophic SuperHyperGraph to achieve one neutrosophic number. This neutrosophic number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{neutrosophic Number}}, S_{\text{neutrosophic SuperHyperSet}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperSet and a neutrosophic SuperHyperMatching. Then

$$\begin{aligned}
&[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

As its consequences, the formal definition of the neutrosophic SuperHyperMatching is re-formalized and redefined as follows.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

To get more precise perceptions, the follow-up expressions propose another formal technical definition for the neutrosophic SuperHyperMatching.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

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In more concise and more convenient ways, the modified definition for the neutrosophic SuperHyperMatching poses the upcoming expressions.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

To translate the statement to this mathematical literature, the formulae will be revised.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

And then,

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

To get more visions in the closer look-up, there's an overall overlook.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}$$

Now, the extension of these types of approaches is up. Since the new term, “neutrosophic SuperHyperNeighborhood”, could be redefined as the collection of the neutrosophic SuperHyperVertices such that any amount of its neutrosophic SuperHyperVertices are incident to a neutrosophic SuperHyperEdge. It’s, literarily, another name for “neutrosophic Quasi-SuperHyperMatching” but, precisely, it’s the generalization of “neutrosophic Quasi-SuperHyperMatching” since “neutrosophic Quasi-SuperHyperMatching” happens “neutrosophic SuperHyperMatching” in a neutrosophic SuperHyperGraph as initial framework and background but “neutrosophic SuperHyperNeighborhood” may not happens “neutrosophic SuperHyperMatching” in a neutrosophic SuperHyperGraph as initial framework and preliminarily background since there are some ambiguities about the neutrosophic SuperHyperCardinality arise from it. To get orderly keywords, the terms, “neutrosophic SuperHyperNeighborhood”, “neutrosophic Quasi-SuperHyperMatching”, and “neutrosophic SuperHyperMatching” are up.
Thus, let $z_{\text{neutrosophic Number}}$, $N_{\text{neutrosophic SuperHyperNeighborhood}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperNeighborhood and a neutrosophic SuperHyperMatching and the new terms are up.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.\end{aligned}$$

And with go back to initial structure,

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max \left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid\\&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= z_{\text{neutrosophic Number}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max \left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\\&= \max \left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= \max \left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up.

The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic

SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Let a neutrosophic SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some neutrosophic SuperHyperVertices r. Consider all neutrosophic numbers of those neutrosophic SuperHyperVertices from that neutrosophic SuperHyperEdge excluding excluding more than r distinct neutrosophic SuperHyperVertices, exclude to any given neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices. Consider there's a neutrosophic R-SuperHyperMatching with the least cardinality, the lower sharp neutrosophic bound for neutrosophic cardinality. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is a neutrosophic SuperHyperSet S of the neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely but it isn't a neutrosophic R-SuperHyperMatching. Since it doesn't have **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some SuperHyperVertices uniquely. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices but it isn't a neutrosophic R-SuperHyperMatching. Since it **doesn't do** the neutrosophic procedure such that such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely [there are at least one neutrosophic SuperHyperVertex outside implying there's, sometimes in the connected neutrosophic SuperHyperGraph $ESHG : (V, E)$, a neutrosophic SuperHyperVertex, titled its neutrosophic SuperHyperNeighbor, to that neutrosophic SuperHyperVertex in the neutrosophic SuperHyperSet S so as S doesn't do "the neutrosophic procedure".]. There's only **one** neutrosophic SuperHyperVertex **outside** the intended neutrosophic SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of neutrosophic SuperHyperNeighborhood. Thus the obvious neutrosophic R-SuperHyperMatching, V_{ESHE} is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching, V_{ESHE}, **is** a neutrosophic SuperHyperSet, V_{ESHE}, **includes** only **all** neutrosophic SuperHyperVertices does forms any kind of neutrosophic pairs are titled neutrosophic SuperHyperNeighbors in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices V_{ESHE}, is the **maximum neutrosophic SuperHyperCardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices **such that** there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely. Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet

of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} \\
&= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}. \\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} \\
&= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} \\
&= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}. \\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} \\
&= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} \\
&= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}. \\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} \\
&= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic

SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

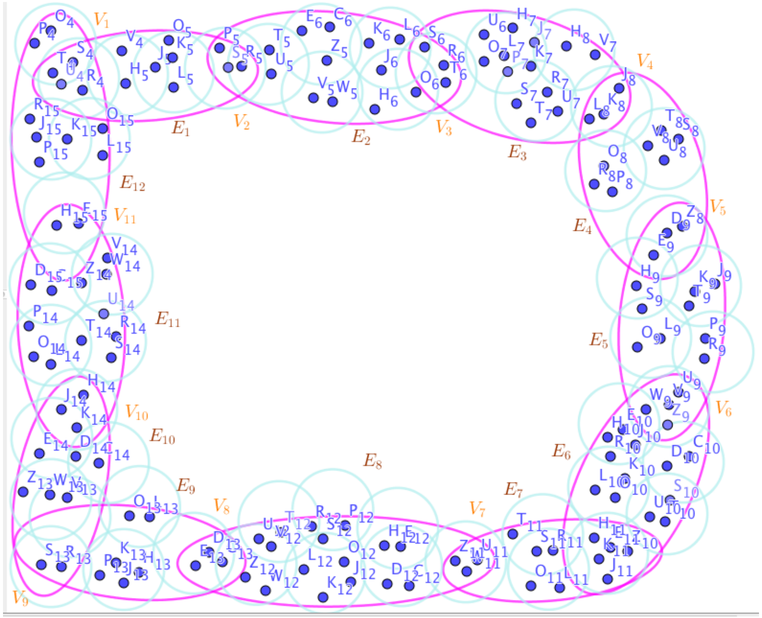

Figure 22. A neutrosophic SuperHyperCycle Associated to the neutrosophic Notions of neutrosophic SuperHyperMatching in the neutrosophic Example (18).

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\lfloor\frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2}\rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=2z^{\lfloor\frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2}\rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}+bz^{t}.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG:(V,E)$. □

Example 18. In the Figure (22), the connected neutrosophic SuperHyperCycle $NSHC:(V,E)$, is highlighted and featured. The obtained neutrosophic SuperHyperSet, in the neutrosophic SuperHyperModel (22), is the neutrosophic SuperHyperMatching.

Proposition 19. *Assume a connected neutrosophic SuperHyperStar $ESHS:(V,E)$. Then a neutrosophic quasi-R-SuperHyperMatching is a neutrosophic SuperHyperSet of the interior neutrosophic SuperHyperVertices, corresponded to a neutrosophic SuperHyperEdge. a neutrosophic quasi-R-SuperHyperMatching has the neutrosophic number of the neutrosophic cardinality of the one neutrosophic SuperHyperEdge. Also,*

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E\in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}} z^{|E|_{neutrosophic\ Cardinality}}\mid E:\in E_{ESHG:(V,E)}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t},\ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=z^{s}+z^{t}+,\ldots.
\end{aligned}$$

Proof. Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. The SuperHyperSet of the SuperHyperVertices $V \setminus V \setminus \{z\}$ isn't a quasi-R-SuperHyperMatching since neither amount of neutrosophic SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the neutrosophic number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

This neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices has the eligibilities to propose property such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices but the maximum neutrosophic cardinality indicates that these neutrosophic type-SuperHyperSets couldn't give us the neutrosophic lower bound in the term of neutrosophic sharpness. In other words, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices is free-quasi-triangle and it doesn't make a contradiction to the supposition on the connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Thus the minimum case never happens in the generality of the connected loopless neutrosophic SuperHyperGraphs. Thus if we assume in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a quasi-R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a quasi-R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Then we've lost some connected loopless neutrosophic SuperHyperClasses of the connected loopless neutrosophic SuperHyperGraphs titled free-triangle, on-triangle, and their quasi-types but the SuperHyperStable is only up in this quasi-R-SuperHyperMatching. It's the contradiction to that fact on the generality. There are some counterexamples to deny this statement. One of them comes from the setting of the graph titled path and cycle as the counterexamples-classes or reversely direction star as the examples-classes, are well-known classes in that setting and they could be considered as the examples-classes and counterexamples-classes for the tight bound of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Let $V \setminus V \setminus \{z\}$ in mind. There's no necessity on the SuperHyperEdge since we need at least two SuperHyperVertices to form a SuperHyperEdge. It doesn't withdraw the principles of the main definition since there's no condition to be satisfied but the condition is on the existence of the SuperHyperEdge instead of acting on the SuperHyperVertices. In other words, if there's a SuperHyperEdge, then the neutrosophic SuperHyperSet has the necessary condition for the intended definition to be applied. Thus the $V \setminus V \setminus \{z\}$ is withdrawn not by the conditions of the main definition

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but by the necessity of the pre-condition on the usage of the main definition.
The neutrosophic structure of the neutrosophic R-SuperHyperMatching decorates the neutrosophic SuperHyperVertices don't have received any neutrosophic connections so as this neutrosophic style implies different versions of neutrosophic SuperHyperEdges with the maximum neutrosophic cardinality in the terms of neutrosophic SuperHyperVertices are spotlight. The lower neutrosophic bound is to have the maximum neutrosophic groups of neutrosophic SuperHyperVertices have perfect neutrosophic connections inside each of SuperHyperEdges and the outside of this neutrosophic SuperHyperSet doesn't matter but regarding the connectedness of the used neutrosophic SuperHyperGraph arising from its neutrosophic properties taken from the fact that it's simple. If there's no more than one neutrosophic SuperHyperVertex in the targeted neutrosophic SuperHyperSet, then there's no neutrosophic connection. Furthermore, the neutrosophic existence of one neutrosophic SuperHyperVertex has no neutrosophic effect to talk about the neutrosophic R-SuperHyperMatching. Since at least two neutrosophic SuperHyperVertices involve to make a title in the neutrosophic background of the neutrosophic SuperHyperGraph. The neutrosophic SuperHyperGraph is obvious if it has no neutrosophic SuperHyperEdge but at least two neutrosophic SuperHyperVertices make the neutrosophic version of neutrosophic SuperHyperEdge. Thus in the neutrosophic setting of non-obvious neutrosophic SuperHyperGraph, there are at least one neutrosophic SuperHyperEdge. It's necessary to mention that the word "Simple" is used as neutrosophic adjective for the initial neutrosophic SuperHyperGraph, induces there's no neutrosophic appearance of the loop neutrosophic version of the neutrosophic SuperHyperEdge and this neutrosophic SuperHyperGraph is said to be loopless. The neutrosophic adjective "loop" on the basic neutrosophic framework engages one neutrosophic SuperHyperVertex but it never happens in this neutrosophic setting. With these neutrosophic bases, on a neutrosophic SuperHyperGraph, there's at least one neutrosophic SuperHyperEdge thus there's at least a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality of a neutrosophic SuperHyperEdge. Thus, a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality at least a neutrosophic SuperHyperEdge. Assume a neutrosophic SuperHyperSet $V \setminus V \setminus \{z\}$. This neutrosophic SuperHyperSet isn't a neutrosophic R-SuperHyperMatching since either the neutrosophic SuperHyperGraph is an obvious neutrosophic SuperHyperModel thus it never happens since there's no neutrosophic usage of this neutrosophic framework and even more there's no neutrosophic connection inside or the neutrosophic SuperHyperGraph isn't obvious and as its consequences, there's a neutrosophic contradiction with the term "neutrosophic R-SuperHyperMatching" since the maximum neutrosophic cardinality never happens for this neutrosophic style of the neutrosophic SuperHyperSet and beyond that there's no neutrosophic connection inside as mentioned in first neutrosophic case in the forms of drawback for this selected neutrosophic SuperHyperSet. Let

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Comes up. This neutrosophic case implies having the neutrosophic style of on-quasi-triangle neutrosophic style on the every neutrosophic elements of this neutrosophic SuperHyperSet. Precisely, the neutrosophic R-SuperHyperMatching is the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that some neutrosophic amount of the neutrosophic SuperHyperVertices are on-quasi-triangle neutrosophic style. The neutrosophic cardinality of the v SuperHypeSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Is the maximum in comparison to the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But the lower neutrosophic bound is up. Thus the minimum neutrosophic cardinality of the maximum neutrosophic cardinality ends up the neutrosophic discussion. The first neutrosophic term refers to the neutrosophic setting of the neutrosophic SuperHyperGraph but this key point is enough since there's a neutrosophic SuperHyperClass of a neutrosophic SuperHyperGraph has no on-quasi-triangle neutrosophic style amid some amount of its neutrosophic SuperHyperVertices. This neutrosophic setting of the neutrosophic SuperHyperModel proposes a neutrosophic SuperHyperSet has only some amount neutrosophic SuperHyperVertices from one neutrosophic SuperHyperEdge such that there's no neutrosophic amount of neutrosophic SuperHyperEdges more than one involving these some amount of these neutrosophic SuperHyperVertices. The neutrosophic cardinality of this neutrosophic SuperHyperSet is the maximum and the neutrosophic case is occurred in the minimum neutrosophic situation. To sum them up, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Has the maximum neutrosophic cardinality such that

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Contains some neutrosophic SuperHyperVertices such that there's distinct-covers-order-amount neutrosophic SuperHyperEdges for amount of neutrosophic SuperHyperVertices taken from the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

It means that the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a neutrosophic R-SuperHyperMatching for the neutrosophic SuperHyperGraph as used neutrosophic background in the neutrosophic terms of worst neutrosophic case and the common theme of the lower neutrosophic bound occurred in the specific neutrosophic SuperHyperClasses of the neutrosophic SuperHyperGraphs which are neutrosophic free-quasi-triangle.
Assume a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic number of the neutrosophic SuperHyperVertices. Then every neutrosophic SuperHyperVertex has at least no neutrosophic SuperHyperEdge with others in common. Thus those neutrosophic SuperHyperVertices have the eligibles to be contained in a neutrosophic R-SuperHyperMatching. Those neutrosophic SuperHyperVertices are potentially included in a neutrosophic style-R-SuperHyperMatching. Formally, consider

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

Are the neutrosophic SuperHyperVertices of a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus

$$Z_i \sim Z_j, \ i \neq j, \ i, j = 1, 2, \ldots, z.$$

where the $\sim$ isn't an equivalence relation but only the symmetric relation on the neutrosophic SuperHyperVertices of the neutrosophic SuperHyperGraph. The formal definition is as follows.

$$Z_i \sim Z_j, \ i \neq j, \ i, j = 1, 2, \ldots, z$$

if and only if Z_i and Z_j are the neutrosophic SuperHyperVertices and there's only and only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ between the neutrosophic SuperHyperVertices Z_i

and Z_j. The other definition for the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ in the terms of neutrosophic R-SuperHyperMatching is

$$\{a_E, b_E, c_E, \ldots, z_E\}.$$

This definition coincides with the definition of the neutrosophic R-SuperHyperMatching but with slightly differences in the maximum neutrosophic cardinality amid those neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperVertices. Thus the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$\max_z |\{Z_1, Z_2, \ldots, Z_z \mid Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}|_{\text{neutrosophic cardinality}},$$

and

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is formalized with mathematical literatures on the neutrosophic R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the neutrosophic SuperHyperVertices belong to the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus,

$$E = \{Z_1, Z_2, \ldots, Z_z \mid Z_i \overset{E}{\sim} Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}.$$

Or

$$\{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But with the slightly differences,

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &\{Z_1, Z_2, \ldots, Z_z \mid \forall i \neq j,\ i,j = 1,2,\ldots,z,\ \exists E_x,\ Z_i \overset{E_x}{\sim} Z_j,\}.\end{aligned}$$

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.\end{aligned}$$

Thus $E \in E_{ESHG:(V,E)}$ is a neutrosophic quasi-R-SuperHyperMatching where $E \in E_{ESHG:(V,E)}$ is fixed that means $E_x = E \in E_{ESHG:(V,E)}$. for all neutrosophic intended SuperHyperVertices but in a neutrosophic SuperHyperMatching, $E_x = E \in E_{ESHG:(V,E)}$ could be different and it's not unique. To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.
The obvious SuperHyperGraph has no neutrosophic SuperHyperEdges. But the non-obvious

neutrosophic SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the neutrosophic optimal SuperHyperObject. It specially delivers some remarks on the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that there's distinct amount of neutrosophic SuperHyperEdges for distinct amount of neutrosophic SuperHyperVertices up to all taken from that neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices but this neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices is either has the maximum neutrosophic SuperHyperCardinality or it doesn't have maximum neutrosophic SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one neutrosophic SuperHyperEdge containing at least all neutrosophic SuperHyperVertices. Thus it forms a neutrosophic quasi-R-SuperHyperMatching where the neutrosophic completion of the neutrosophic incidence is up in that. Thus it's, literarily, a neutrosophic embedded R-SuperHyperMatching. The SuperHyperNotions of embedded SuperHyperSet and quasi-SuperHyperSet coincide. In the original setting, these types of SuperHyperSets only don't satisfy on the maximum SuperHyperCardinality. Thus the embedded setting is elected such that those SuperHyperSets have the maximum neutrosophic SuperHyperCardinality and they're neutrosophic SuperHyperOptimal. The less than two distinct types of neutrosophic SuperHyperVertices are included in the minimum neutrosophic style of the embedded neutrosophic R-SuperHyperMatching. The interior types of the neutrosophic SuperHyperVertices are deciders. Since the neutrosophic number of SuperHyperNeighbors are only affected by the interior neutrosophic SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the neutrosophic SuperHyperSet for any distinct types of neutrosophic SuperHyperVertices pose the neutrosophic R-SuperHyperMatching. Thus neutrosophic exterior SuperHyperVertices could be used only in one neutrosophic SuperHyperEdge and in neutrosophic SuperHyperRelation with the interior neutrosophic SuperHyperVertices in that neutrosophic SuperHyperEdge. In the embedded neutrosophic SuperHyperMatching, there's the usage of exterior neutrosophic SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One neutrosophic SuperHyperVertex has no connection, inside. Thus, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the neutrosophic R-SuperHyperMatching. The neutrosophic R-SuperHyperMatching with the exclusion of the exclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge and with other terms, the neutrosophic R-SuperHyperMatching with the inclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge, is a neutrosophic quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.

The main definition of the neutrosophic R-SuperHyperMatching has two titles. a neutrosophic quasi-R-SuperHyperMatching and its corresponded quasi-maximum neutrosophic R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any neutrosophic number, there's a neutrosophic quasi-R-SuperHyperMatching with that quasi-maximum neutrosophic SuperHyperCardinality in the terms of the embedded neutrosophic SuperHyperGraph. If there's an embedded neutrosophic SuperHyperGraph, then the neutrosophic quasi-SuperHyperNotions lead us to take the collection of all the neutrosophic quasi-R-SuperHyperMatchings for all neutrosophic numbers less than its neutrosophic corresponded maximum number. The essence of the neutrosophic SuperHyperMatching ends up but this essence starts up in the terms of the neutrosophic quasi-R-SuperHyperMatching, again and more in the operations of collecting all the neutrosophic quasi-R-SuperHyperMatchings acted on the all possible used formations of the neutrosophic SuperHyperGraph to achieve one neutrosophic number. This neutrosophic number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{neutrosophic Number}}, S_{\text{neutrosophic SuperHyperSet}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperSet and a neutrosophic SuperHyperMatching. Then

$$\begin{aligned}
&[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

As its consequences, the formal definition of the neutrosophic SuperHyperMatching is re-formalized and redefined as follows.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

To get more precise perceptions, the follow-up expressions propose another formal technical definition for the neutrosophic SuperHyperMatching.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

In more concise and more convenient ways, the modified definition for the neutrosophic SuperHyperMatching poses the upcoming expressions.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

To translate the statement to this mathematical literature, the formulae will be revised.

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\\&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

And then,

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

To get more visions in the closer look-up, there's an overall overlook.

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid\\&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}},\\&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid\\&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}},\\&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= z_{\text{neutrosophic Number}} \mid\\&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\\&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}
$$

Now, the extension of these types of approaches is up. Since the new term, "neutrosophic SuperHyperNeighborhood", could be redefined as the collection of the neutrosophic SuperHyperVertices such that any amount of its neutrosophic SuperHyperVertices are incident to a neutrosophic SuperHyperEdge. It's, literarily, another name for "neutrosophic Quasi-SuperHyperMatching" but, precisely, it's the generalization of "neutrosophic Quasi-SuperHyperMatching" since "neutrosophic Quasi-SuperHyperMatching" happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and background but "neutrosophic SuperHyperNeighborhood" may not happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and preliminarily background since there are some ambiguities about the neutrosophic SuperHyperCardinality arise from it. To get orderly keywords, the terms, "neutrosophic SuperHyperNeighborhood", "neutrosophic Quasi-SuperHyperMatching", and "neutrosophic SuperHyperMatching" are up.
Thus, let $z_{\text{neutrosophic Number}}$, $N_{\text{neutrosophic SuperHyperNeighborhood}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperNeighborhood and a neutrosophic SuperHyperMatching and the new terms are up.

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}
$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}
$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}
$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}
$$

And with go back to initial structure,

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}}\{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}}\{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up.
The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\left\{E \in E_{ESHG:(V,E)} \mid |E|=\max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\right\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Let a neutrosophic SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some neutrosophic SuperHyperVertices r. Consider all neutrosophic numbers of those neutrosophic SuperHyperVertices from that neutrosophic SuperHyperEdge excluding excluding more than r distinct neutrosophic SuperHyperVertices, exclude to any given neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices. Consider there's

a neutrosophic R-SuperHyperMatching with the least cardinality, the lower sharp neutrosophic bound for neutrosophic cardinality. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is a neutrosophic SuperHyperSet S of the neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely but it isn't a neutrosophic R-SuperHyperMatching. Since it doesn't have **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some SuperHyperVertices uniquely. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices but it isn't a neutrosophic R-SuperHyperMatching. Since it **doesn't do** the neutrosophic procedure such that such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely [there are at least one neutrosophic SuperHyperVertex outside implying there's, sometimes in the connected neutrosophic SuperHyperGraph $ESHG : (V, E)$, a neutrosophic SuperHyperVertex, titled its neutrosophic SuperHyperNeighbor, to that neutrosophic SuperHyperVertex in the neutrosophic SuperHyperSet S so as S doesn't do "the neutrosophic procedure".]. There's only **one** neutrosophic SuperHyperVertex **outside** the intended neutrosophic SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of neutrosophic SuperHyperNeighborhood. Thus the obvious neutrosophic R-SuperHyperMatching, V_{ESHE} is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching, V_{ESHE}, **is** a neutrosophic SuperHyperSet, V_{ESHE}, **includes** only **all** neutrosophic SuperHyperVertices does forms any kind of neutrosophic pairs are titled neutrosophic SuperHyperNeighbors in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices V_{ESHE}, is the **maximum neutrosophic SuperHyperCardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices **such that** there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely. Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching} \\
&= \{E \in E_{ESHG:(V,E)}\}. \\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial} \\
&= \sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}} \mid E:\in E_{ESHG:(V,E)}}. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots. \\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}\ |\ E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}\ |\ E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}\ |\ E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}} \mid {}^{E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}} \mid {}^{E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}} \mid {}^{E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

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Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= \sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}} \mid E :\in E_{ESHG:(V,E)}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

Is the neutrosophic SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= \sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}} \mid E :\in E_{ESHG:(V,E)}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= \sum_{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}} z^{|E|_{\text{neutrosophic Cardinality}}} \mid E :\in E_{ESHG:(V,E)}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. □

Example 20. In the Figure (23), the connected neutrosophic SuperHyperStar $ESHS : (V, E)$, is highlighted and featured. The obtained neutrosophic SuperHyperSet, by the Algorithm in previous neutrosophic result, of the neutrosophic SuperHyperVertices of the connected neutrosophic SuperHyperStar $ESHS : (V, E)$, in the neutrosophic SuperHyperModel (23), is the neutrosophic SuperHyperMatching.

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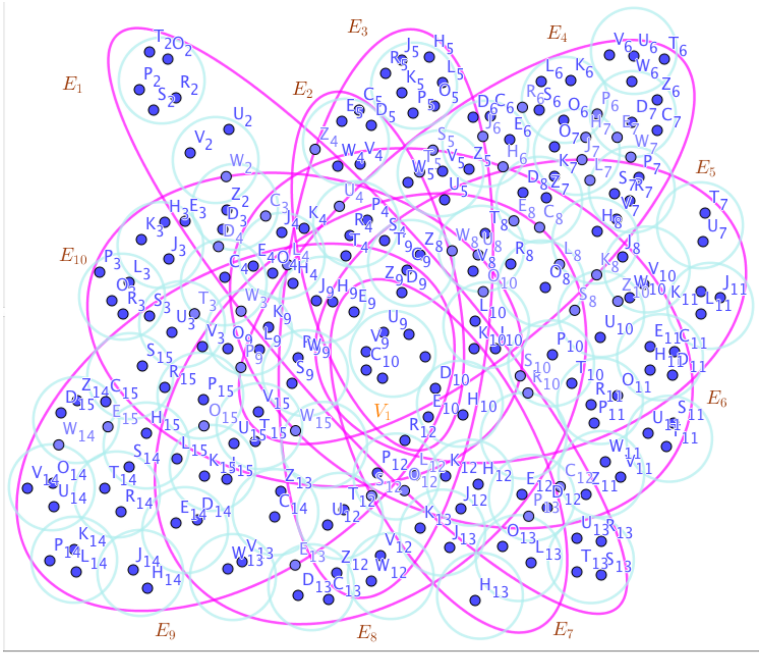

Figure 23. A neutrosophic SuperHyperStar Associated to the neutrosophic Notions of neutrosophic SuperHyperMatching in the neutrosophic Example (20).

Proposition 21. *Assume a connected neutrosophic SuperHyperBipartite $ESHB : (V, E)$. Then a neutrosophic R-SuperHyperMatching is a neutrosophic SuperHyperSet of the interior neutrosophic SuperHyperVertices with no neutrosophic exceptions in the form of interior neutrosophic SuperHyperVertices titled neutrosophic SuperHyperNeighbors. a neutrosophic R-SuperHyperMatching has the neutrosophic maximum number of on neutrosophic cardinality of the minimum SuperHyperPart minus those have common neutrosophic SuperHyperNeighbors and not unique neutrosophic SuperHyperNeighbors. Also,*

$$
\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}
$$

Proof. Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. The SuperHyperSet of the SuperHyperVertices $V \setminus V \setminus \{z\}$ isn't a quasi-R-SuperHyperMatching since neither amount of neutrosophic SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the neutrosophic number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the neutrosophic SuperHyperSet

$$
V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.
$$

This neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices has the eligibilities to propose property such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices but the maximum neutrosophic cardinality indicates that these neutrosophic type-SuperHyperSets couldn't give us the neutrosophic lower bound in the term of neutrosophic sharpness. In other words, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices is free-quasi-triangle and it doesn't make a contradiction to the supposition on the connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Thus the minimum case never happens in the generality of the connected loopless neutrosophic SuperHyperGraphs. Thus if we assume in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a quasi-R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a quasi-R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Then we've lost some connected loopless neutrosophic SuperHyperClasses of the connected loopless neutrosophic SuperHyperGraphs titled free-triangle, on-triangle, and their quasi-types but the SuperHyperStable is only up in this quasi-R-SuperHyperMatching. It's the contradiction to that fact on the generality. There are some counterexamples to deny this statement. One of them comes from the setting of the graph titled path and cycle as the counterexamples-classes or reversely direction star as the examples-classes, are well-known classes in that setting and they could be considered as the examples-classes and counterexamples-classes for the tight bound of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Let $V \setminus V \setminus \{z\}$ in mind. There's no necessity on the SuperHyperEdge since we need at least two SuperHyperVertices to form a SuperHyperEdge. It doesn't withdraw the principles of the main definition since there's no condition to be satisfied but the condition is on the existence of the SuperHyperEdge instead of acting on the SuperHyperVertices. In other words, if there's a SuperHyperEdge, then the neutrosophic SuperHyperSet has the necessary condition for the intended definition to be applied. Thus the $V \setminus V \setminus \{z\}$ is withdrawn not by the conditions of the main definition but by the necessity of the pre-condition on the usage of the main definition.
The neutrosophic structure of the neutrosophic R-SuperHyperMatching decorates the neutrosophic SuperHyperVertices don't have received any neutrosophic connections so as this neutrosophic style implies different versions of neutrosophic SuperHyperEdges with the maximum neutrosophic cardinality in the terms of neutrosophic SuperHyperVertices are spotlight. The lower neutrosophic bound is to have the maximum neutrosophic groups of neutrosophic SuperHyperVertices have perfect neutrosophic connections inside each of SuperHyperEdges and the outside of this neutrosophic SuperHyperSet doesn't matter but regarding the connectedness of the used neutrosophic SuperHyperGraph arising from its neutrosophic properties taken from the fact that it's simple. If there's no more than one neutrosophic SuperHyperVertex in the targeted neutrosophic SuperHyperSet, then there's no neutrosophic connection. Furthermore, the neutrosophic existence of one neutrosophic SuperHyperVertex has no neutrosophic effect to talk about the neutrosophic R-SuperHyperMatching. Since at least two neutrosophic SuperHyperVertices involve to make a title in the neutrosophic

background of the neutrosophic SuperHyperGraph. The neutrosophic SuperHyperGraph is obvious if it has no neutrosophic SuperHyperEdge but at least two neutrosophic SuperHyperVertices make the neutrosophic version of neutrosophic SuperHyperEdge. Thus in the neutrosophic setting of non-obvious neutrosophic SuperHyperGraph, there are at least one neutrosophic SuperHyperEdge. It's necessary to mention that the word "Simple" is used as neutrosophic adjective for the initial neutrosophic SuperHyperGraph, induces there's no neutrosophic appearance of the loop neutrosophic version of the neutrosophic SuperHyperEdge and this neutrosophic SuperHyperGraph is said to be loopless. The neutrosophic adjective "loop" on the basic neutrosophic framework engages one neutrosophic SuperHyperVertex but it never happens in this neutrosophic setting. With these neutrosophic bases, on a neutrosophic SuperHyperGraph, there's at least one neutrosophic SuperHyperEdge thus there's at least a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality of a neutrosophic SuperHyperEdge. Thus, a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality at least a neutrosophic SuperHyperEdge. Assume a neutrosophic SuperHyperSet $V \setminus V \setminus \{z\}$. This neutrosophic SuperHyperSet isn't a neutrosophic R-SuperHyperMatching since either the neutrosophic SuperHyperGraph is an obvious neutrosophic SuperHyperModel thus it never happens since there's no neutrosophic usage of this neutrosophic framework and even more there's no neutrosophic connection inside or the neutrosophic SuperHyperGraph isn't obvious and as its consequences, there's a neutrosophic contradiction with the term "neutrosophic R-SuperHyperMatching" since the maximum neutrosophic cardinality never happens for this neutrosophic style of the neutrosophic SuperHyperSet and beyond that there's no neutrosophic connection inside as mentioned in first neutrosophic case in the forms of drawback for this selected neutrosophic SuperHyperSet. Let

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Comes up. This neutrosophic case implies having the neutrosophic style of on-quasi-triangle neutrosophic style on the every neutrosophic elements of this neutrosophic SuperHyperSet. Precisely, the neutrosophic R-SuperHyperMatching is the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that some neutrosophic amount of the neutrosophic SuperHyperVertices are on-quasi-triangle neutrosophic style. The neutrosophic cardinality of the v SuperHypeSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Is the maximum in comparison to the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But the lower neutrosophic bound is up. Thus the minimum neutrosophic cardinality of the maximum neutrosophic cardinality ends up the neutrosophic discussion. The first neutrosophic term refers to the neutrosophic setting of the neutrosophic SuperHyperGraph but this key point is enough since there's a neutrosophic SuperHyperClass of a neutrosophic SuperHyperGraph has no on-quasi-triangle neutrosophic style amid some amount of its neutrosophic SuperHyperVertices. This neutrosophic setting of the neutrosophic SuperHyperModel proposes a neutrosophic SuperHyperSet has only some amount neutrosophic SuperHyperVertices from one neutrosophic SuperHyperEdge such that there's no neutrosophic amount of neutrosophic SuperHyperEdges more than one involving these some amount of these neutrosophic SuperHyperVertices. The neutrosophic cardinality of this neutrosophic SuperHyperSet is the maximum and the neutrosophic case is occurred in the minimum neutrosophic situation. To sum them up, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Has the maximum neutrosophic cardinality such that

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Contains some neutrosophic SuperHyperVertices such that there's distinct-covers-order-amount neutrosophic SuperHyperEdges for amount of neutrosophic SuperHyperVertices taken from the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

It means that the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a neutrosophic R-SuperHyperMatching for the neutrosophic SuperHyperGraph as used neutrosophic background in the neutrosophic terms of worst neutrosophic case and the common theme of the lower neutrosophic bound occurred in the specific neutrosophic SuperHyperClasses of the neutrosophic SuperHyperGraphs which are neutrosophic free-quasi-triangle.
Assume a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic number of the neutrosophic SuperHyperVertices. Then every neutrosophic SuperHyperVertex has at least no neutrosophic SuperHyperEdge with others in common. Thus those neutrosophic SuperHyperVertices have the eligibles to be contained in a neutrosophic R-SuperHyperMatching. Those neutrosophic SuperHyperVertices are potentially included in a neutrosophic style-R-SuperHyperMatching. Formally, consider

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

Are the neutrosophic SuperHyperVertices of a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z.$$

where the $\sim$ isn't an equivalence relation but only the symmetric relation on the neutrosophic SuperHyperVertices of the neutrosophic SuperHyperGraph. The formal definition is as follows.

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z$$

if and only if Z_i and Z_j are the neutrosophic SuperHyperVertices and there's only and only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ between the neutrosophic SuperHyperVertices Z_i and Z_j. The other definition for the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ in the terms of neutrosophic R-SuperHyperMatching is

$$\{a_E, b_E, c_E, \ldots, z_E\}.$$

This definition coincides with the definition of the neutrosophic R-SuperHyperMatching but with slightly differences in the maximum neutrosophic cardinality amid those neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperVertices. Thus the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$\max_z |\{Z_1, Z_2, \ldots, Z_z \mid Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}|_{\text{neutrosophic cardinality}},$$

and

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

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is formalized with mathematical literatures on the neutrosophic R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the neutrosophic SuperHyperVertices belong to the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus,

$$E = \{Z_1, Z_2, \ldots, Z_z \mid Z_i \overset{E}{\sim} Z_j,\ i \neq j,\ i, j = 1, 2, \ldots, z\}.$$

Or

$$\{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But with the slightly differences,

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &\{Z_1, Z_2, \ldots, Z_z \mid \forall i \neq j,\ i, j = 1, 2, \ldots, z,\ \exists E_x,\ Z_i \overset{E_x}{\sim} Z_j, \}.\end{aligned}$$

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.\end{aligned}$$

Thus $E \in E_{ESHG:(V,E)}$ is a neutrosophic quasi-R-SuperHyperMatching where $E \in E_{ESHG:(V,E)}$ is fixed that means $E_x = E \in E_{ESHG:(V,E)}$. for all neutrosophic intended SuperHyperVertices but in a neutrosophic SuperHyperMatching, $E_x = E \in E_{ESHG:(V,E)}$ could be different and it's not unique. To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.
The obvious SuperHyperGraph has no neutrosophic SuperHyperEdges. But the non-obvious neutrosophic SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the neutrosophic optimal SuperHyperObject. It specially delivers some remarks on the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that there's distinct amount of neutrosophic SuperHyperEdges for distinct amount of neutrosophic SuperHyperVertices up to all taken from that neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices but this neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices is either has the maximum neutrosophic SuperHyperCardinality or it doesn't have maximum neutrosophic SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one neutrosophic SuperHyperEdge containing at least all neutrosophic SuperHyperVertices. Thus it forms a neutrosophic quasi-R-SuperHyperMatching where the neutrosophic completion of the neutrosophic incidence is up in that. Thus it's, literarily, a neutrosophic embedded R-SuperHyperMatching. The SuperHyperNotions of embedded SuperHyperSet and quasi-SuperHyperSet coincide. In the original setting, these types of SuperHyperSets only don't satisfy on the maximum SuperHyperCardinality. Thus the embedded setting is elected such that those SuperHyperSets have the maximum neutrosophic SuperHyperCardinality and they're neutrosophic SuperHyperOptimal. The less than two distinct

types of neutrosophic SuperHyperVertices are included in the minimum neutrosophic style of the embedded neutrosophic R-SuperHyperMatching. The interior types of the neutrosophic SuperHyperVertices are deciders. Since the neutrosophic number of SuperHyperNeighbors are only affected by the interior neutrosophic SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the neutrosophic SuperHyperSet for any distinct types of neutrosophic SuperHyperVertices pose the neutrosophic R-SuperHyperMatching. Thus neutrosophic exterior SuperHyperVertices could be used only in one neutrosophic SuperHyperEdge and in neutrosophic SuperHyperRelation with the interior neutrosophic SuperHyperVertices in that neutrosophic SuperHyperEdge. In the embedded neutrosophic SuperHyperMatching, there's the usage of exterior neutrosophic SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One neutrosophic SuperHyperVertex has no connection, inside. Thus, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the neutrosophic R-SuperHyperMatching. The neutrosophic R-SuperHyperMatching with the exclusion of the exclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge and with other terms, the neutrosophic R-SuperHyperMatching with the inclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge, is a neutrosophic quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.

The main definition of the neutrosophic R-SuperHyperMatching has two titles. a neutrosophic quasi-R-SuperHyperMatching and its corresponded quasi-maximum neutrosophic R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any neutrosophic number, there's a neutrosophic quasi-R-SuperHyperMatching with that quasi-maximum neutrosophic SuperHyperCardinality in the terms of the embedded neutrosophic SuperHyperGraph. If there's an embedded neutrosophic SuperHyperGraph, then the neutrosophic quasi-SuperHyperNotions lead us to take the collection of all the neutrosophic quasi-R-SuperHyperMatchings for all neutrosophic numbers less than its neutrosophic corresponded maximum number. The essence of the neutrosophic SuperHyperMatching ends up but this essence starts up in the terms of the neutrosophic quasi-R-SuperHyperMatching, again and more in the operations of collecting all the neutrosophic quasi-R-SuperHyperMatchings acted on the all possible used formations of the neutrosophic SuperHyperGraph to achieve one neutrosophic number. This neutrosophic number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{neutrosophic Number}}$, $S_{\text{neutrosophic SuperHyperSet}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperSet and a neutrosophic SuperHyperMatching. Then

$$\begin{aligned}
&[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

As its consequences, the formal definition of the neutrosophic SuperHyperMatching is re-formalized and redefined as follows.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =$$
$$\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid$$
$$S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}},$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= z_{\text{neutrosophic Number}}\}.$$

To get more precise perceptions, the follow-up expressions propose another formal technical definition for the neutrosophic SuperHyperMatching.

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =$$
$$\cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid$$
$$S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}},$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= z_{\text{neutrosophic Number}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

In more concise and more convenient ways, the modified definition for the neutrosophic SuperHyperMatching poses the upcoming expressions.

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

To translate the statement to this mathematical literature, the formulae will be revised.

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

And then,

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

To get more visions in the closer look-up, there's an overall overlook.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\} \}.$$

Now, the extension of these types of approaches is up. Since the new term, "neutrosophic SuperHyperNeighborhood", could be redefined as the collection of the neutrosophic SuperHyperVertices such that any amount of its neutrosophic SuperHyperVertices are incident to a neutrosophic SuperHyperEdge. It's, literarily, another name for "neutrosophic Quasi-SuperHyperMatching" but, precisely, it's the generalization of "neutrosophic Quasi-SuperHyperMatching" since "neutrosophic Quasi-SuperHyperMatching" happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and background but "neutrosophic SuperHyperNeighborhood" may not happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and preliminarily background since there are some ambiguities about the neutrosophic SuperHyperCardinality arise from it. To get orderly keywords, the terms, "neutrosophic SuperHyperNeighborhood", "neutrosophic Quasi-SuperHyperMatching", and "neutrosophic SuperHyperMatching" are up.

Thus, let $z_{\text{neutrosophic Number}}$, $N_{\text{neutrosophic SuperHyperNeighborhood}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$

be a neutrosophic number, a neutrosophic SuperHyperNeighborhood and a neutrosophic SuperHyperMatching and the new terms are up.

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}}\{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}}\{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid\\&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= z_{\text{neutrosophic Number}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid\\&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.\end{aligned}$$

And with go back to initial structure,

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}}\{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$\begin{aligned}&G_{\text{neutrosophic SuperHyperMatching}} =\\&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} =\\&\cup_{z_{\text{neutrosophic Number}}}\{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid\\&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}\\&= z_{\text{neutrosophic Number}} \mid\\&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}\\&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.\end{aligned}$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max\Big\{|E| \mid E \in E_{ESHG:(V,E)}\Big\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max\Big\{|E| \mid E \in E_{ESHG:(V,E)}\Big\}\}.$$

Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

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doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Let a neutrosophic SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some neutrosophic SuperHyperVertices r. Consider all neutrosophic numbers of those neutrosophic SuperHyperVertices from that neutrosophic SuperHyperEdge excluding excluding more than r distinct neutrosophic SuperHyperVertices, exclude to any given neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices. Consider there's a neutrosophic R-SuperHyperMatching with the least cardinality, the lower sharp neutrosophic bound for neutrosophic cardinality. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is a neutrosophic SuperHyperSet S of the neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely but it isn't a neutrosophic R-SuperHyperMatching. Since it doesn't have **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some SuperHyperVertices uniquely. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices but it isn't a neutrosophic R-SuperHyperMatching. Since it **doesn't do** the neutrosophic procedure such that such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely [there are at least one neutrosophic SuperHyperVertex outside implying there's, sometimes in the connected neutrosophic SuperHyperGraph $ESHG : (V, E)$, a neutrosophic SuperHyperVertex, titled its neutrosophic SuperHyperNeighbor, to that neutrosophic SuperHyperVertex in the neutrosophic SuperHyperSet S so as S doesn't do "the neutrosophic procedure".]. There's only **one** neutrosophic SuperHyperVertex **outside** the intended neutrosophic SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of neutrosophic SuperHyperNeighborhood. Thus the obvious neutrosophic R-SuperHyperMatching, V_{ESHE} is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching, V_{ESHE}, **is** a neutrosophic SuperHyperSet, V_{ESHE},

includes only **all** neutrosophic SuperHyperVertices does forms any kind of neutrosophic pairs are titled neutrosophic SuperHyperNeighbors in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices V_{ESHE}, is the **maximum neutrosophic SuperHyperCardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices **such that** there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely. Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet

includes only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG:(V,E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

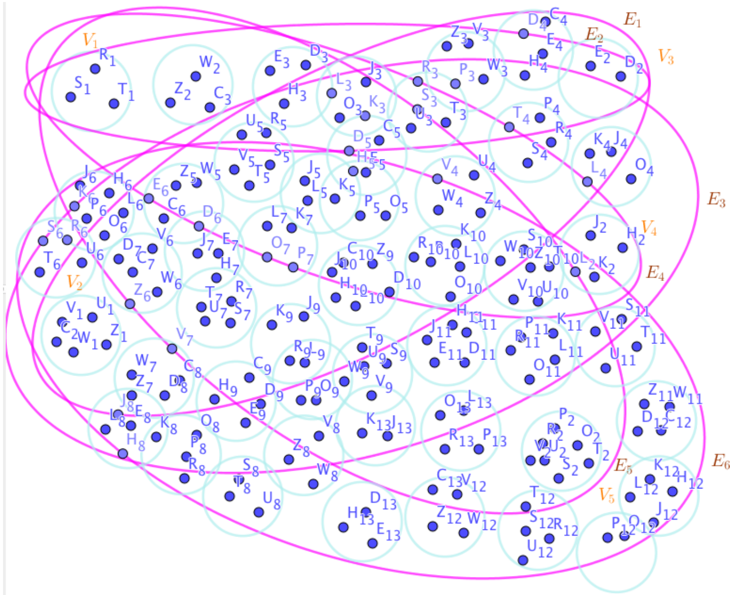

Figure 24. A neutrosophic SuperHyperBipartite neutrosophic Associated to the neutrosophic Notions of neutrosophic SuperHyperMatching in the Example (22).

is only and only

$$
\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}
$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. □

Example 22. In the neutrosophic Figure (24), the connected neutrosophic SuperHyperBipartite $ESHB : (V, E)$, is neutrosophic highlighted and neutrosophic featured. The obtained neutrosophic SuperHyperSet, by the neutrosophic Algorithm in previous neutrosophic result, of the neutrosophic SuperHyperVertices of the connected neutrosophic SuperHyperBipartite $ESHB : (V, E)$, in the neutrosophic SuperHyperModel (24), is the neutrosophic SuperHyperMatching.

Proposition 23. *Assume a connected neutrosophic SuperHyperMultipartite $ESHM : (V, E)$. Then a neutrosophic R-SuperHyperMatching is a neutrosophic SuperHyperSet of the interior neutrosophic SuperHyperVertices with only no neutrosophic exception in the neutrosophic form of interior neutrosophic SuperHyperVertices from a neutrosophic SuperHyperPart and only no exception in the form of interior SuperHyperVertices from another SuperHyperPart titled "SuperHyperNeighbors" with neglecting and ignoring more than some of them aren't SuperHyperNeighbors to all. a neutrosophic R-SuperHyperMatching has the neutrosophic maximum number on all the neutrosophic summation on the neutrosophic cardinality* *of the all neutrosophic SuperHyperParts form some SuperHyperEdges minus those make neutrosophic SuperHypeNeighbors to some not all or not unique. Also,*

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Proof. Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. The SuperHyperSet of the SuperHyperVertices $V \setminus V \setminus \{z\}$ isn't a quasi-R-SuperHyperMatching since neither amount of neutrosophic SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the neutrosophic number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

This neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices has the eligibilities to propose property such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices but the maximum neutrosophic cardinality indicates that these neutrosophic type-SuperHyperSets couldn't give us the neutrosophic lower bound in the term of neutrosophic sharpness. In other words, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices is free-quasi-triangle and it doesn't make a contradiction to the supposition on the connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Thus the minimum case never happens in the generality of the connected loopless neutrosophic SuperHyperGraphs. Thus if we assume in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a quasi-R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a quasi-R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Then we've lost some connected loopless neutrosophic SuperHyperClasses of the connected loopless neutrosophic SuperHyperGraphs titled free-triangle, on-triangle, and their quasi-types but the SuperHyperStable is only up in this quasi-R-SuperHyperMatching. It's the contradiction to that fact on the generality. There are some counterexamples to deny this statement. One of them comes from the setting of the graph titled path and cycle as the counterexamples-classes or reversely direction star as the examples-classes, are well-known classes in that setting and they could be considered as the examples-classes and counterexamples-classes for the tight bound of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Let $V \setminus V \setminus \{z\}$ in mind. There's no necessity on the SuperHyperEdge since we need at least two SuperHyperVertices to form a SuperHyperEdge. It doesn't withdraw the principles of the main definition since there's no condition to be satisfied but the condition is on the existence of the SuperHyperEdge instead of acting on the SuperHyperVertices. In other words, if there's a SuperHyperEdge, then the neutrosophic SuperHyperSet has the necessary condition for the intended definition to be applied. Thus the $V \setminus V \setminus \{z\}$ is withdrawn not by the conditions of the main definition but by the necessity of the pre-condition on the usage of the main definition.
The neutrosophic structure of the neutrosophic R-SuperHyperMatching decorates the neutrosophic SuperHyperVertices don't have received any neutrosophic connections so as this neutrosophic style implies different versions of neutrosophic SuperHyperEdges with the maximum neutrosophic cardinality in the terms of neutrosophic SuperHyperVertices are spotlight. The lower neutrosophic bound is to have the maximum neutrosophic groups of neutrosophic SuperHyperVertices have perfect neutrosophic connections inside each of SuperHyperEdges and the outside of this neutrosophic SuperHyperSet doesn't matter but regarding the connectedness of the used neutrosophic SuperHyperGraph arising from its neutrosophic properties taken from the fact that it's simple. If there's no more than one neutrosophic SuperHyperVertex in the targeted neutrosophic SuperHyperSet, then there's no neutrosophic connection. Furthermore, the neutrosophic existence of one neutrosophic SuperHyperVertex has no neutrosophic effect to talk about the neutrosophic R-SuperHyperMatching. Since at least two neutrosophic SuperHyperVertices involve to make a title in the neutrosophic background of the neutrosophic SuperHyperGraph. The neutrosophic SuperHyperGraph is obvious if it has no neutrosophic SuperHyperEdge but at least two neutrosophic SuperHyperVertices make the neutrosophic version of neutrosophic SuperHyperEdge. Thus in the neutrosophic setting of non-obvious neutrosophic SuperHyperGraph, there are at least one neutrosophic SuperHyperEdge. It's necessary to mention that the word "Simple" is used as neutrosophic adjective for the initial neutrosophic SuperHyperGraph, induces there's no neutrosophic appearance of the loop neutrosophic version of the neutrosophic SuperHyperEdge and this neutrosophic SuperHyperGraph is said to be loopless. The neutrosophic adjective "loop" on the basic neutrosophic framework engages one neutrosophic SuperHyperVertex but it never happens in this neutrosophic setting. With these neutrosophic bases, on a neutrosophic SuperHyperGraph, there's at least one neutrosophic SuperHyperEdge thus there's at least a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality of a neutrosophic SuperHyperEdge. Thus, a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality at least a neutrosophic SuperHyperEdge. Assume a neutrosophic SuperHyperSet $V \setminus V \setminus \{z\}$. This neutrosophic SuperHyperSet isn't a neutrosophic R-SuperHyperMatching since either the neutrosophic SuperHyperGraph is an obvious neutrosophic SuperHyperModel thus it never happens since there's no neutrosophic usage of this neutrosophic framework and even more there's no neutrosophic connection inside or the neutrosophic SuperHyperGraph isn't obvious and as its consequences, there's a neutrosophic contradiction with the term "neutrosophic R-SuperHyperMatching" since the maximum neutrosophic cardinality never happens for this neutrosophic style of the neutrosophic SuperHyperSet and beyond that there's no neutrosophic connection inside as mentioned in first neutrosophic case in the forms of drawback for this selected neutrosophic SuperHyperSet. Let

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Comes up. This neutrosophic case implies having the neutrosophic style of on-quasi-triangle neutrosophic style on the every neutrosophic elements of this neutrosophic SuperHyperSet. Precisely, the neutrosophic R-SuperHyperMatching is the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that some neutrosophic amount of the neutrosophic SuperHyperVertices are on-quasi-triangle neutrosophic style. The neutrosophic cardinality of the v SuperHypeSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Is the maximum in comparison to the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But the lower neutrosophic bound is up. Thus the minimum neutrosophic cardinality of the maximum neutrosophic cardinality ends up the neutrosophic discussion. The first neutrosophic term refers to the neutrosophic setting of the neutrosophic SuperHyperGraph but this key point is enough since there's a neutrosophic SuperHyperClass of a neutrosophic SuperHyperGraph has no on-quasi-triangle neutrosophic style amid some amount of its neutrosophic SuperHyperVertices. This neutrosophic setting of the neutrosophic SuperHyperModel proposes a neutrosophic SuperHyperSet has only some amount neutrosophic SuperHyperVertices from one neutrosophic SuperHyperEdge such that there's no neutrosophic amount of neutrosophic SuperHyperEdges more than one involving these some amount of these neutrosophic SuperHyperVertices. The neutrosophic cardinality of this neutrosophic SuperHyperSet is the maximum and the neutrosophic case is occurred in the minimum neutrosophic situation. To sum them up, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Has the maximum neutrosophic cardinality such that

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Contains some neutrosophic SuperHyperVertices such that there's distinct-covers-order-amount neutrosophic SuperHyperEdges for amount of neutrosophic SuperHyperVertices taken from the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

It means that the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a neutrosophic R-SuperHyperMatching for the neutrosophic SuperHyperGraph as used neutrosophic background in the neutrosophic terms of worst neutrosophic case and the common theme of the lower neutrosophic bound occurred in the specific neutrosophic SuperHyperClasses of the neutrosophic SuperHyperGraphs which are neutrosophic free-quasi-triangle.
Assume a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic number of the neutrosophic SuperHyperVertices. Then every neutrosophic SuperHyperVertex has at least no neutrosophic SuperHyperEdge with others in common. Thus those neutrosophic SuperHyperVertices have the eligibles to be contained in a neutrosophic R-SuperHyperMatching. Those neutrosophic SuperHyperVertices are potentially included in a neutrosophic style-R-SuperHyperMatching. Formally, consider

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

Are the neutrosophic SuperHyperVertices of a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus

$$Z_i \sim Z_j,\ i \neq j,\ i, j = 1, 2, \ldots, z.$$

where the $\sim$ isn't an equivalence relation but only the symmetric relation on the neutrosophic SuperHyperVertices of the neutrosophic SuperHyperGraph. The formal definition is as follows.

$$Z_i \sim Z_j,\ i \neq j,\ i, j = 1, 2, \ldots, z$$

if and only if Z_i and Z_j are the neutrosophic SuperHyperVertices and there's only and only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ between the neutrosophic SuperHyperVertices Z_i and Z_j. The other definition for the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ in the terms of neutrosophic R-SuperHyperMatching is

$$\{a_E, b_E, c_E, \ldots, z_E\}.$$

This definition coincides with the definition of the neutrosophic R-SuperHyperMatching but with slightly differences in the maximum neutrosophic cardinality amid those neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperVertices. Thus the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$\max_z |\{Z_1, Z_2, \ldots, Z_z \mid Z_i \sim Z_j,\ i \neq j,\ i, j = 1, 2, \ldots, z\}|_{\text{neutrosophic cardinality}},$$

and

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is formalized with mathematical literatures on the neutrosophic R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the neutrosophic SuperHyperVertices belong to the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus,

$$E = \{Z_1, Z_2, \ldots, Z_z \mid Z_i \overset{E}{\sim} Z_j,\ i \neq j,\ i, j = 1, 2, \ldots, z\}.$$

Or

$$\{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But with the slightly differences,

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} = \\ &\{Z_1, Z_2, \ldots, Z_z \mid \forall i \neq j,\ i, j = 1, 2, \ldots, z,\ \exists E_x,\ Z_i \overset{E_x}{\sim} Z_j,\}.\end{aligned}$$

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} = \\ &V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.\end{aligned}$$

Thus $E \in E_{ESHG:(V,E)}$ is a neutrosophic quasi-R-SuperHyperMatching where $E \in E_{ESHG:(V,E)}$ is fixed that means $E_x = E \in E_{ESHG:(V,E)}$. for all neutrosophic intended SuperHyperVertices but in a neutrosophic SuperHyperMatching, $E_x = E \in E_{ESHG:(V,E)}$ could be different and it's not unique. To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.

The obvious SuperHyperGraph has no neutrosophic SuperHyperEdges. But the non-obvious neutrosophic SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the neutrosophic optimal SuperHyperObject. It specially delivers some remarks on the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that there's distinct amount of neutrosophic SuperHyperEdges for distinct amount of neutrosophic SuperHyperVertices up to all taken from that neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices but this neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices is either has the maximum neutrosophic SuperHyperCardinality or it doesn't have maximum neutrosophic SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one neutrosophic SuperHyperEdge containing at least all neutrosophic SuperHyperVertices. Thus it forms a neutrosophic quasi-R-SuperHyperMatching where the neutrosophic completion of the neutrosophic incidence is up in that. Thus it's, literarily, a neutrosophic embedded R-SuperHyperMatching. The SuperHyperNotions of embedded SuperHyperSet and quasi-SuperHyperSet coincide. In the original setting, these types of SuperHyperSets only don't satisfy on the maximum SuperHyperCardinality. Thus the embedded setting is elected such that those SuperHyperSets have the maximum neutrosophic SuperHyperCardinality and they're neutrosophic SuperHyperOptimal. The less than two distinct types of neutrosophic SuperHyperVertices are included in the minimum neutrosophic style of the embedded neutrosophic R-SuperHyperMatching. The interior types of the neutrosophic SuperHyperVertices are deciders. Since the neutrosophic number of SuperHyperNeighbors are only affected by the interior neutrosophic SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the neutrosophic SuperHyperSet for any distinct types of neutrosophic SuperHyperVertices pose the neutrosophic R-SuperHyperMatching. Thus neutrosophic exterior SuperHyperVertices could be used only in one neutrosophic SuperHyperEdge and in neutrosophic SuperHyperRelation with the interior neutrosophic SuperHyperVertices in that neutrosophic SuperHyperEdge. In the embedded neutrosophic SuperHyperMatching, there's the usage of exterior neutrosophic SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One neutrosophic SuperHyperVertex has no connection, inside. Thus, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the neutrosophic R-SuperHyperMatching. The neutrosophic R-SuperHyperMatching with the exclusion of the exclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge and with other terms, the neutrosophic R-SuperHyperMatching with the inclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge, is a neutrosophic quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.

The main definition of the neutrosophic R-SuperHyperMatching has two titles. a neutrosophic quasi-R-SuperHyperMatching and its corresponded quasi-maximum neutrosophic R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any neutrosophic number, there's a neutrosophic quasi-R-SuperHyperMatching with that quasi-maximum neutrosophic SuperHyperCardinality in the terms of the embedded neutrosophic SuperHyperGraph. If there's an embedded neutrosophic SuperHyperGraph, then the neutrosophic quasi-SuperHyperNotions lead us to take the collection of all the neutrosophic quasi-R-SuperHyperMatchings for all neutrosophic numbers less than its neutrosophic corresponded maximum number. The essence of the neutrosophic SuperHyperMatching ends up but this essence starts up in the terms of the neutrosophic quasi-R-SuperHyperMatching, again and more in the operations of collecting all the neutrosophic quasi-R-SuperHyperMatchings acted on the all possible used formations of the neutrosophic SuperHyperGraph to achieve one neutrosophic number. This neutrosophic number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{neutrosophic Number}}, S_{\text{neutrosophic SuperHyperSet}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperSet and a neutrosophic SuperHyperMatching. Then

$$\begin{aligned}
&[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

As its consequences, the formal definition of the neutrosophic SuperHyperMatching is re-formalized and redefined as follows.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

To get more precise perceptions, the follow-up expressions propose another formal technical definition for the neutrosophic SuperHyperMatching.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

In more concise and more convenient ways, the modified definition for the neutrosophic SuperHyperMatching poses the upcoming expressions.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}$$

To translate the statement to this mathematical literature, the formulae will be revised.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

And then,

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

To get more visions in the closer look-up, there's an overall overlook.

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

$$\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.
\end{aligned}$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}
$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.
\end{aligned}
$$

Now, the extension of these types of approaches is up. Since the new term, "neutrosophic SuperHyperNeighborhood", could be redefined as the collection of the neutrosophic SuperHyperVertices such that any amount of its neutrosophic SuperHyperVertices are incident to a neutrosophic SuperHyperEdge. It's, literarily, another name for "neutrosophic Quasi-SuperHyperMatching" but, precisely, it's the generalization of "neutrosophic Quasi-SuperHyperMatching" since "neutrosophic Quasi-SuperHyperMatching" happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and background but "neutrosophic SuperHyperNeighborhood" may not happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and preliminarily background since there are some ambiguities about the neutrosophic SuperHyperCardinality arise from it. To get orderly keywords, the terms, "neutrosophic SuperHyperNeighborhood", "neutrosophic Quasi-SuperHyperMatching", and "neutrosophic SuperHyperMatching" are up.
Thus, let $z_{\text{neutrosophic Number}}$, $N_{\text{neutrosophic SuperHyperNeighborhood}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperNeighborhood and a neutrosophic SuperHyperMatching and the new terms are up.

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}
$$

$$
\begin{aligned}
&G_{\text{neutrosophic SuperHyperMatching}} = \\
&\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \\
&\cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid \\
&|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}} \mid \\
&|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} \\
&= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.
\end{aligned}
$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

And with go back to initial structure,

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up.

The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic

SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Let a neutrosophic SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some neutrosophic SuperHyperVertices r. Consider all neutrosophic numbers of those neutrosophic SuperHyperVertices from that neutrosophic SuperHyperEdge excluding excluding more than r distinct neutrosophic SuperHyperVertices, exclude to any given neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices. Consider there's a neutrosophic R-SuperHyperMatching with the least cardinality, the lower sharp neutrosophic bound for neutrosophic cardinality. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is a neutrosophic SuperHyperSet S of the neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely but it isn't a neutrosophic R-SuperHyperMatching. Since it doesn't have **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some SuperHyperVertices uniquely. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices but it isn't a neutrosophic R-SuperHyperMatching. Since it **doesn't do** the neutrosophic procedure such that such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely [there are at least one neutrosophic SuperHyperVertex outside implying there's, sometimes in the connected neutrosophic SuperHyperGraph $ESHG : (V, E)$, a neutrosophic SuperHyperVertex, titled its neutrosophic SuperHyperNeighbor, to that neutrosophic SuperHyperVertex in the neutrosophic SuperHyperSet S so as S doesn't do "the neutrosophic procedure".]. There's only **one** neutrosophic SuperHyperVertex **outside** the intended neutrosophic SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of neutrosophic SuperHyperNeighborhood. Thus the obvious neutrosophic R-SuperHyperMatching, V_{ESHE} is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching, V_{ESHE}, **is** a neutrosophic SuperHyperSet, V_{ESHE}, **includes** only **all** neutrosophic SuperHyperVertices does forms any kind of neutrosophic pairs are titled neutrosophic SuperHyperNeighbors in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices V_{ESHE}, is the **maximum neutrosophic SuperHyperCardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices **such that** there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely. Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet

of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic

SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Is the neutrosophic SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. □

Example 24. In the Figure (25), the connected neutrosophic SuperHyperMultipartite $ESHM : (V, E)$, is highlighted and neutrosophic featured. The obtained neutrosophic SuperHyperSet, by the Algorithm in previous neutrosophic result, of the neutrosophic SuperHyperVertices of the connected neutrosophic SuperHyperMultipartite $ESHM : (V, E)$, in the neutrosophic SuperHyperModel (25), is the neutrosophic SuperHyperMatching.

Proposition 25. *Assume a connected neutrosophic SuperHyperWheel $ESHW : (V, E)$. Then a neutrosophic R-SuperHyperMatching is a neutrosophic SuperHyperSet of the interior neutrosophic SuperHyperVertices, excluding the neutrosophic SuperHyperCenter, with only no exception in the form of interior neutrosophic*

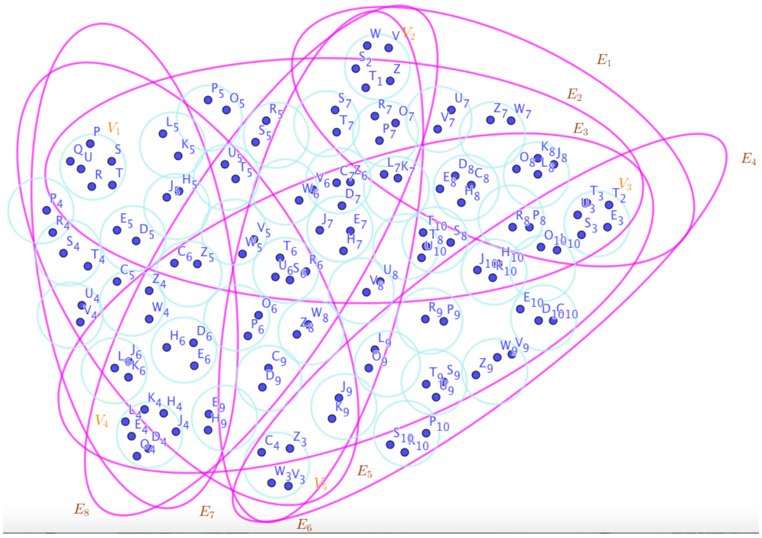

Figure 25. A neutrosophic SuperHyperMultipartite Associated to the Notions of neutrosophic SuperHyperMatching in the Example (24).

SuperHyperVertices from same neutrosophic SuperHyperEdge with the exclusion on neutrosophic SuperHypeNeighbors to some of them and not all. a neutrosophic R-SuperHyperMatching has the neutrosophic maximum number on all the neutrosophic number of all the neutrosophic SuperHyperEdges don't have common neutrosophic SuperHyperNeighbors. Also,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{neutrosophic\ Cardinality}}{2} \rfloor}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.\\
&\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.
\end{aligned}$$

Proof. Assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. The SuperHyperSet of the SuperHyperVertices $V \setminus V \setminus \{z\}$ isn't a quasi-R-SuperHyperMatching since neither amount of neutrosophic SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the neutrosophic number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

This neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices has the eligibilities to propose property such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices but the maximum neutrosophic cardinality indicates that these neutrosophic type-SuperHyperSets couldn't give us the neutrosophic lower bound in the term of neutrosophic sharpness. In other words, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

of the neutrosophic SuperHyperVertices is free-quasi-triangle and it doesn't make a contradiction to the supposition on the connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Thus the minimum case never happens in the generality of the connected loopless neutrosophic SuperHyperGraphs. Thus if we assume in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a quasi-R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a quasi-R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Then we've lost some connected loopless neutrosophic SuperHyperClasses of the connected loopless neutrosophic SuperHyperGraphs titled free-triangle, on-triangle, and their quasi-types but the SuperHyperStable is only up in this quasi-R-SuperHyperMatching. It's the contradiction to that fact on the generality. There are some counterexamples to deny this statement. One of them comes from the setting of the graph titled path and cycle as the counterexamples-classes or reversely direction star as the examples-classes, are well-known classes in that setting and they could be considered as the examples-classes and counterexamples-classes for the tight bound of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Let $V \setminus V \setminus \{z\}$ in mind. There's no necessity on the SuperHyperEdge since we need at least two SuperHyperVertices to form a SuperHyperEdge. It doesn't withdraw the principles of the main definition since there's no condition to be satisfied but the condition is on the existence of the SuperHyperEdge instead of acting on the SuperHyperVertices. In other words, if there's a SuperHyperEdge, then the neutrosophic SuperHyperSet has the necessary condition for the intended definition to be applied. Thus the $V \setminus V \setminus \{z\}$ is withdrawn not by the conditions of the main definition but by the necessity of the pre-condition on the usage of the main definition.
The neutrosophic structure of the neutrosophic R-SuperHyperMatching decorates the neutrosophic SuperHyperVertices don't have received any neutrosophic connections so as this neutrosophic style implies different versions of neutrosophic SuperHyperEdges with the maximum neutrosophic cardinality in the terms of neutrosophic SuperHyperVertices are spotlight. The lower neutrosophic bound is to have the maximum neutrosophic groups of neutrosophic SuperHyperVertices have perfect neutrosophic connections inside each of SuperHyperEdges and the outside of this neutrosophic SuperHyperSet doesn't matter but regarding the connectedness of the used neutrosophic SuperHyperGraph arising from its neutrosophic properties taken from the fact that it's simple. If there's no more than one neutrosophic SuperHyperVertex in the targeted neutrosophic SuperHyperSet, then there's no neutrosophic connection. Furthermore, the neutrosophic existence of one neutrosophic SuperHyperVertex has no neutrosophic effect to talk about the neutrosophic R-SuperHyperMatching. Since at least two neutrosophic SuperHyperVertices involve to make a title in the neutrosophic background of the neutrosophic SuperHyperGraph. The neutrosophic SuperHyperGraph is obvious if it has no neutrosophic SuperHyperEdge but at least two neutrosophic SuperHyperVertices make the neutrosophic version of neutrosophic SuperHyperEdge. Thus in the neutrosophic setting of non-obvious neutrosophic SuperHyperGraph, there are at least one neutrosophic SuperHyperEdge. It's necessary to mention that the word "Simple" is used as neutrosophic

adjective for the initial neutrosophic SuperHyperGraph, induces there's no neutrosophic appearance of the loop neutrosophic version of the neutrosophic SuperHyperEdge and this neutrosophic SuperHyperGraph is said to be loopless. The neutrosophic adjective "loop" on the basic neutrosophic framework engages one neutrosophic SuperHyperVertex but it never happens in this neutrosophic setting. With these neutrosophic bases, on a neutrosophic SuperHyperGraph, there's at least one neutrosophic SuperHyperEdge thus there's at least a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality of a neutrosophic SuperHyperEdge. Thus, a neutrosophic R-SuperHyperMatching has the neutrosophic cardinality at least a neutrosophic SuperHyperEdge. Assume a neutrosophic SuperHyperSet $V \setminus V \setminus \{z\}$. This neutrosophic SuperHyperSet isn't a neutrosophic R-SuperHyperMatching since either the neutrosophic SuperHyperGraph is an obvious neutrosophic SuperHyperModel thus it never happens since there's no neutrosophic usage of this neutrosophic framework and even more there's no neutrosophic connection inside or the neutrosophic SuperHyperGraph isn't obvious and as its consequences, there's a neutrosophic contradiction with the term "neutrosophic R-SuperHyperMatching" since the maximum neutrosophic cardinality never happens for this neutrosophic style of the neutrosophic SuperHyperSet and beyond that there's no neutrosophic connection inside as mentioned in first neutrosophic case in the forms of drawback for this selected neutrosophic SuperHyperSet. Let

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Comes up. This neutrosophic case implies having the neutrosophic style of on-quasi-triangle neutrosophic style on the every neutrosophic elements of this neutrosophic SuperHyperSet. Precisely, the neutrosophic R-SuperHyperMatching is the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that some neutrosophic amount of the neutrosophic SuperHyperVertices are on-quasi-triangle neutrosophic style. The neutrosophic cardinality of the v SuperHypeSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots, a_{E'}, b_{E'}, c_{E'}, \ldots\}_{E,E'=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}$$

Is the maximum in comparison to the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But the lower neutrosophic bound is up. Thus the minimum neutrosophic cardinality of the maximum neutrosophic cardinality ends up the neutrosophic discussion. The first neutrosophic term refers to the neutrosophic setting of the neutrosophic SuperHyperGraph but this key point is enough since there's a neutrosophic SuperHyperClass of a neutrosophic SuperHyperGraph has no on-quasi-triangle neutrosophic style amid some amount of its neutrosophic SuperHyperVertices. This neutrosophic setting of the neutrosophic SuperHyperModel proposes a neutrosophic SuperHyperSet has only some amount neutrosophic SuperHyperVertices from one neutrosophic SuperHyperEdge such that there's no neutrosophic amount of neutrosophic SuperHyperEdges more than one involving these some amount of these neutrosophic SuperHyperVertices. The neutrosophic cardinality of this neutrosophic SuperHyperSet is the maximum and the neutrosophic case is occurred in the minimum neutrosophic situation. To sum them up, the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Has the maximum neutrosophic cardinality such that

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Contains some neutrosophic SuperHyperVertices such that there's distinct-covers-order-amount neutrosophic SuperHyperEdges for amount of neutrosophic SuperHyperVertices taken from the neutrosophic SuperHyperSet

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

It means that the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is a neutrosophic R-SuperHyperMatching for the neutrosophic SuperHyperGraph as used neutrosophic background in the neutrosophic terms of worst neutrosophic case and the common theme of the lower neutrosophic bound occurred in the specific neutrosophic SuperHyperClasses of the neutrosophic SuperHyperGraphs which are neutrosophic free-quasi-triangle.
Assume a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic number of the neutrosophic SuperHyperVertices. Then every neutrosophic SuperHyperVertex has at least no neutrosophic SuperHyperEdge with others in common. Thus those neutrosophic SuperHyperVertices have the eligibles to be contained in a neutrosophic R-SuperHyperMatching. Those neutrosophic SuperHyperVertices are potentially included in a neutrosophic style-R-SuperHyperMatching. Formally, consider

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

Are the neutrosophic SuperHyperVertices of a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z.$$

where the $\sim$ isn't an equivalence relation but only the symmetric relation on the neutrosophic SuperHyperVertices of the neutrosophic SuperHyperGraph. The formal definition is as follows.

$$Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z$$

if and only if Z_i and Z_j are the neutrosophic SuperHyperVertices and there's only and only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ between the neutrosophic SuperHyperVertices Z_i and Z_j. The other definition for the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ in the terms of neutrosophic R-SuperHyperMatching is

$$\{a_E, b_E, c_E, \ldots, z_E\}.$$

This definition coincides with the definition of the neutrosophic R-SuperHyperMatching but with slightly differences in the maximum neutrosophic cardinality amid those neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperVertices. Thus the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$\max_z |\{Z_1, Z_2, \ldots, Z_z \mid Z_i \sim Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}|_{\text{neutrosophic cardinality}},$$

and

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is formalized with mathematical literatures on the neutrosophic R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the neutrosophic SuperHyperVertices belong to the neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$. Thus,

$$E = \{Z_1, Z_2, \ldots, Z_z \mid Z_i \overset{E}{\sim} Z_j,\ i \neq j,\ i,j = 1,2,\ldots,z\}.$$

Or

$$\{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

But with the slightly differences,

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &\{Z_1, Z_2, \ldots, Z_z \mid \forall i \neq j,\ i,j = 1,2,\ldots,z,\ \exists E_x,\ Z_i \overset{E_x}{\sim} Z_j,\}.\end{aligned}$$

$$\begin{aligned}&\text{neutrosophic R-SuperHyperMatching} =\\ &V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.\end{aligned}$$

Thus $E \in E_{ESHG:(V,E)}$ is a neutrosophic quasi-R-SuperHyperMatching where $E \in E_{ESHG:(V,E)}$ is fixed that means $E_x = E \in E_{ESHG:(V,E)}$. for all neutrosophic intended SuperHyperVertices but in a neutrosophic SuperHyperMatching, $E_x = E \in E_{ESHG:(V,E)}$ could be different and it's not unique. To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. If a neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z neutrosophic SuperHyperVertices, then the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least

$$V \setminus (V \setminus \{a_E, b_E, c_E, \ldots, z_E\}).$$

It's straightforward that the neutrosophic cardinality of the neutrosophic R-SuperHyperMatching is at least the maximum neutrosophic number of neutrosophic SuperHyperVertices of the neutrosophic SuperHyperEdges with the maximum number of the neutrosophic SuperHyperEdges. In other words, the maximum number of the neutrosophic SuperHyperEdges contains the maximum neutrosophic number of neutrosophic SuperHyperVertices are renamed to neutrosophic SuperHyperMatching in some cases but the maximum number of the neutrosophic SuperHyperEdge with the maximum neutrosophic number of neutrosophic SuperHyperVertices, has the neutrosophic SuperHyperVertices are contained in a neutrosophic R-SuperHyperMatching.
The obvious SuperHyperGraph has no neutrosophic SuperHyperEdges. But the non-obvious neutrosophic SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the neutrosophic optimal SuperHyperObject. It specially delivers some remarks on the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices such that there's distinct amount of neutrosophic SuperHyperEdges for distinct amount of neutrosophic SuperHyperVertices up to all taken from that neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices but this neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices is either has the maximum neutrosophic SuperHyperCardinality or it doesn't have maximum neutrosophic SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one neutrosophic SuperHyperEdge containing at least all neutrosophic SuperHyperVertices. Thus it forms a neutrosophic quasi-R-SuperHyperMatching where the neutrosophic completion of the neutrosophic incidence is up in that. Thus it's, literarily, a neutrosophic embedded R-SuperHyperMatching. The SuperHyperNotions of embedded SuperHyperSet and quasi-SuperHyperSet coincide. In the original setting, these types of SuperHyperSets only don't satisfy on the maximum SuperHyperCardinality. Thus the embedded setting is elected such that those SuperHyperSets have the maximum neutrosophic SuperHyperCardinality and they're neutrosophic SuperHyperOptimal. The less than two distinct

types of neutrosophic SuperHyperVertices are included in the minimum neutrosophic style of the embedded neutrosophic R-SuperHyperMatching. The interior types of the neutrosophic SuperHyperVertices are deciders. Since the neutrosophic number of SuperHyperNeighbors are only affected by the interior neutrosophic SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the neutrosophic SuperHyperSet for any distinct types of neutrosophic SuperHyperVertices pose the neutrosophic R-SuperHyperMatching. Thus neutrosophic exterior SuperHyperVertices could be used only in one neutrosophic SuperHyperEdge and in neutrosophic SuperHyperRelation with the interior neutrosophic SuperHyperVertices in that neutrosophic SuperHyperEdge. In the embedded neutrosophic SuperHyperMatching, there's the usage of exterior neutrosophic SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One neutrosophic SuperHyperVertex has no connection, inside. Thus, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the neutrosophic R-SuperHyperMatching. The neutrosophic R-SuperHyperMatching with the exclusion of the exclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge and with other terms, the neutrosophic R-SuperHyperMatching with the inclusion of all neutrosophic SuperHyperVertices in one neutrosophic SuperHyperEdge, is a neutrosophic quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious neutrosophic SuperHyperGraph $ESHG : (V, E)$. There's only one neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior neutrosophic SuperHyperVertices inside of any given neutrosophic quasi-R-SuperHyperMatching minus all neutrosophic SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique neutrosophic SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct neutrosophic SuperHyperVertices in an neutrosophic quasi-R-SuperHyperMatching, minus all neutrosophic SuperHypeNeighbor to some of them but not all of them.
The main definition of the neutrosophic R-SuperHyperMatching has two titles. a neutrosophic quasi-R-SuperHyperMatching and its corresponded quasi-maximum neutrosophic R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any neutrosophic number, there's a neutrosophic quasi-R-SuperHyperMatching with that quasi-maximum neutrosophic SuperHyperCardinality in the terms of the embedded neutrosophic SuperHyperGraph. If there's an embedded neutrosophic SuperHyperGraph, then the neutrosophic quasi-SuperHyperNotions lead us to take the collection of all the neutrosophic quasi-R-SuperHyperMatchings for all neutrosophic numbers less than its neutrosophic corresponded maximum number. The essence of the neutrosophic SuperHyperMatching ends up but this essence starts up in the terms of the neutrosophic quasi-R-SuperHyperMatching, again and more in the operations of collecting all the neutrosophic quasi-R-SuperHyperMatchings acted on the all possible used formations of the neutrosophic SuperHyperGraph to achieve one neutrosophic number. This neutrosophic number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{neutrosophic Number}}, S_{\text{neutrosophic SuperHyperSet}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$ be a neutrosophic number, a neutrosophic SuperHyperSet and a neutrosophic SuperHyperMatching. Then

$$
\begin{aligned}
&[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \{S_{\text{neutrosophic SuperHyperSet}} \mid \\
&S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, \\
&|S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} \\
&= z_{\text{neutrosophic Number}}\}.
\end{aligned}
$$

As its consequences, the formal definition of the neutrosophic SuperHyperMatching is re-formalized and redefined as follows.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}}\}.$$

To get more precise perceptions, the follow-up expressions propose another formal technical definition for the neutrosophic SuperHyperMatching.

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

In more concise and more convenient ways, the modified definition for the neutrosophic SuperHyperMatching poses the upcoming expressions.

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

To translate the statement to this mathematical literature, the formulae will be revised.

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

And then,

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

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To get more visions in the closer look-up, there's an overall overlook.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}}\{S_{\text{neutrosophic SuperHyperSet}} \mid S_{\text{neutrosophic SuperHyperSet}} = G_{\text{neutrosophic SuperHyperMatching}}, |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{S \in \cup_{z_{\text{neutrosophic Number}}}[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |S_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max\left\{|E| \mid E \in E_{ESHG:(V,E)}\right\}\}.$$

Now, the extension of these types of approaches is up. Since the new term, "neutrosophic SuperHyperNeighborhood", could be redefined as the collection of the neutrosophic SuperHyperVertices such that any amount of its neutrosophic SuperHyperVertices are incident to a neutrosophic SuperHyperEdge. It's, literarily, another name for "neutrosophic Quasi-SuperHyperMatching" but, precisely, it's the generalization of "neutrosophic Quasi-SuperHyperMatching" since "neutrosophic Quasi-SuperHyperMatching" happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and background but "neutrosophic SuperHyperNeighborhood" may not happens "neutrosophic SuperHyperMatching" in a neutrosophic SuperHyperGraph as initial framework and preliminarily background since there are some ambiguities about the neutrosophic SuperHyperCardinality arise from it. To get orderly keywords, the terms, "neutrosophic SuperHyperNeighborhood", "neutrosophic Quasi-SuperHyperMatching", and "neutrosophic SuperHyperMatching" are up.
Thus, let $z_{\text{neutrosophic Number}}, N_{\text{neutrosophic SuperHyperNeighborhood}}$ and $G_{\text{neutrosophic SuperHyperMatching}}$

be a neutrosophic number, a neutrosophic SuperHyperNeighborhood and a neutrosophic SuperHyperMatching and the new terms are up.

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}\}.$$

And with go back to initial structure,

$$G_{\text{neutrosophic SuperHyperMatching}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} = \{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} = \cup_{z_{\text{neutrosophic Number}}} \{N_{\text{neutrosophic SuperHyperNeighborhood}} \mid |N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}} = z_{\text{neutrosophic Number}} \mid |N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}} = \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|N_{\text{neutrosophic SuperHyperNeighborhood}}|_{\text{neutrosophic Cardinality}}$$
$$= \max_{[z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}}} z_{\text{neutrosophic Number}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

$$G_{\text{neutrosophic SuperHyperMatching}} =$$
$$\{N_{\text{neutrosophic SuperHyperNeighborhood}} \in \cup_{z_{\text{neutrosophic Number}}} [z_{\text{neutrosophic Number}}]_{\text{neutrosophic Class}} \mid$$
$$|N_{\text{neutrosophic SuperHyperSet}}|_{\text{neutrosophic Cardinality}}$$
$$= \max \left\{ |E| \mid E \in E_{ESHG:(V,E)} \right\}\}.$$

Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching.

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

The neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is an **neutrosophic R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge amid some neutrosophic SuperHyperVertices instead of all given by **neutrosophic SuperHyperMatching** is related to the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

There's not only **one** neutrosophic SuperHyperVertex **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet **includes** only **one** neutrosophic SuperHyperVertex. But the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E| = \max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

doesn't have less than two SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of neutrosophic SuperHyperVertices,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices,

$$(V \setminus V \setminus \{x, z\}) \cup \{xy\}$$

or

$$(V \setminus V \setminus \{x, z\}) \cup \{zy\}$$

is an neutrosophic R-SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it'**s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some amount neutrosophic SuperHyperVertices instead of all given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching. There isn't only less than two neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Thus the non-obvious neutrosophic R-SuperHyperMatching,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is up. The non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

Is the neutrosophic SuperHyperSet, not:

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

does includes only less than two SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ but it's impossible in the case, they've corresponded to an SuperHyperEdge. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic R-SuperHyperMatching"

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic R-SuperHyperMatching,

is only and only

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, not only a neutrosophic free-triangle embedded SuperHyperModel and a neutrosophic on-triangle embedded SuperHyperModel but also it's a neutrosophic stable embedded SuperHyperModel. But all only non-obvious simple neutrosophic type-SuperHyperSets of the neutrosophic R-SuperHyperMatching amid those obvious simple neutrosophic type-SuperHyperSets of the neutrosophic SuperHyperMatching, are

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$.
To sum them up, assume a connected loopless neutrosophic SuperHyperGraph $ESHG : (V, E)$. Then in the worst case, literally,

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

is a neutrosophic R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of a neutrosophic R-SuperHyperMatching is the cardinality of

$$V \setminus V \setminus \{a_E, b_E, c_E, \ldots\}_{E=\{E \in E_{ESHG:(V,E)} \mid |E|=\max\{|E| \mid E \in E_{ESHG:(V,E)}\}\}}.$$

To sum them up, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The all interior neutrosophic SuperHyperVertices belong to any neutrosophic quasi-R-SuperHyperMatching if for any of them, and any of other corresponded neutrosophic SuperHyperVertex, some interior neutrosophic SuperHyperVertices are mutually neutrosophic SuperHyperNeighbors with no neutrosophic exception at all minus all neutrosophic SuperHypeNeighbors to any amount of them.
Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Let a neutrosophic SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some neutrosophic SuperHyperVertices r. Consider all neutrosophic numbers of those neutrosophic SuperHyperVertices from that neutrosophic SuperHyperEdge excluding excluding more than r distinct neutrosophic SuperHyperVertices, exclude to any given neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices. Consider there's a neutrosophic R-SuperHyperMatching with the least cardinality, the lower sharp neutrosophic bound for neutrosophic cardinality. Assume a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is a neutrosophic SuperHyperSet S of the neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely but it isn't a neutrosophic R-SuperHyperMatching. Since it doesn't have **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's a neutrosophic SuperHyperEdge to have some SuperHyperVertices uniquely. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum neutrosophic cardinality of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices but it isn't a neutrosophic R-SuperHyperMatching. Since it **doesn't do** the neutrosophic procedure such that such that there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely [there are at least one neutrosophic SuperHyperVertex outside implying there's, sometimes in the connected neutrosophic SuperHyperGraph $ESHG : (V, E)$, a neutrosophic SuperHyperVertex, titled its neutrosophic SuperHyperNeighbor, to that neutrosophic SuperHyperVertex in the neutrosophic SuperHyperSet S so as S doesn't do "the neutrosophic procedure".]. There's only **one** neutrosophic SuperHyperVertex **outside** the intended neutrosophic SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of neutrosophic SuperHyperNeighborhood. Thus the obvious neutrosophic R-SuperHyperMatching, V_{ESHE} is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic R-SuperHyperMatching, V_{ESHE}, **is** a neutrosophic SuperHyperSet, V_{ESHE},

includes only **all** neutrosophic SuperHyperVertices does forms any kind of neutrosophic pairs are titled neutrosophic SuperHyperNeighbors in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperVertices V_{ESHE}, is the **maximum neutrosophic SuperHyperCardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices **such that** there's a neutrosophic SuperHyperEdge to have some neutrosophic SuperHyperVertices uniquely. Thus, in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. Any neutrosophic R-SuperHyperMatching only contains all interior neutrosophic SuperHyperVertices and all exterior neutrosophic SuperHyperVertices from the unique neutrosophic SuperHyperEdge where there's any of them has all possible neutrosophic SuperHyperNeighbors in and there's all neutrosophic SuperHyperNeighborhoods in with no exception minus all neutrosophic SuperHypeNeighbors to some of them not all of them but everything is possible about neutrosophic SuperHyperNeighborhoods and neutrosophic SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices] is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

is the simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. The neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is an **neutrosophic SuperHyperMatching** $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is a neutrosophic type-SuperHyperSet with **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There are not only **two** neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious neutrosophic SuperHyperMatching is up. The obvious simple neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching is a neutrosophic SuperHyperSet

includes only **two** neutrosophic SuperHyperVertices. But the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Doesn't have less than three SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet. Thus the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching **is** up. To sum them up, the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is the non-obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching. Since the neutrosophic SuperHyperSet of the neutrosophic SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is an neutrosophic SuperHyperMatching $\mathcal{C}(ESHG)$ for an neutrosophic SuperHyperGraph $ESHG : (V, E)$ is the neutrosophic SuperHyperSet S of neutrosophic SuperHyperVertices such that there's no a neutrosophic SuperHyperEdge for some neutrosophic SuperHyperVertices given by that neutrosophic type-SuperHyperSet called the neutrosophic SuperHyperMatching **and** it's an neutrosophic **SuperHyperMatching**. Since it**'s** **the maximum neutrosophic cardinality** of a neutrosophic SuperHyperSet S of neutrosophic SuperHyperEdges[SuperHyperVertices] such that there's no neutrosophic SuperHyperVertex of a neutrosophic SuperHyperEdge is common and there's

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an neutrosophic SuperHyperEdge for all neutrosophic SuperHyperVertices. There aren't only less than three neutrosophic SuperHyperVertices **inside** the intended neutrosophic SuperHyperSet,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Thus the non-obvious neutrosophic SuperHyperMatching,

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is up. The obvious simple neutrosophic type-SuperHyperSet of the neutrosophic SuperHyperMatching, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Is the neutrosophic SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

Does includes only less than three SuperHyperVertices in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

"neutrosophic SuperHyperMatching"

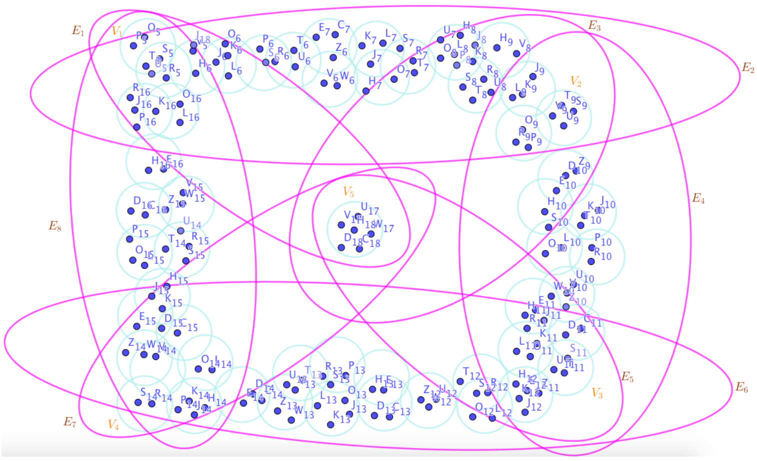

Figure 26. A neutrosophic SuperHyperWheel neutrosophic Associated to the neutrosophic Notions of neutrosophic SuperHyperMatching in the neutrosophic Example (26).

amid those obvious[non-obvious] simple neutrosophic type-SuperHyperSets called the

neutrosophic SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= 2z^{\lfloor \frac{|E_{ESHG:(V,E)}|_{\text{neutrosophic Cardinality}}}{2} \rfloor}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}.$$
$$\mathcal{C}(NSHG)_{neutrosophicR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

In a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$. □

Example 26. In the neutrosophic Figure (**??**), the connected neutrosophic SuperHyperWheel $NSHW : (V, E)$, is neutrosophic highlighted and featured. The obtained neutrosophic SuperHyperSet, by the Algorithm in previous result, of the neutrosophic SuperHyperVertices of the connected neutrosophic SuperHyperWheel $ESHW : (V, E)$, in the neutrosophic SuperHyperModel (**??**), is the neutrosophic SuperHyperMatching.

6. General Neutrosophic Results

For the neutrosophic SuperHyperMatching theory, some general results are introduced in the setting of SuperHyperGraph theory and neutrosophic SuperHyperGraph theory.

Remark 27. Let remind that the neutrosophic SuperHyperMatching is "redefined" on the positions of the alphabets.

Corollary 28. *Assume neutrosophic SuperHyperMatching. Then*

$$neutrosophic\ neutrosophicSuperHyperMatching =$$
$$\{theneutrosophicSuperHyperMatchingoftheSuperHyperVertices \mid$$
$$\max |SuperHyperOffensiveSuperHyper$$
$$Clique|_{neutrosophiccardinalityamidthoseneutrosophicSuperHyperMatching.}\}$$

plus one SuperHypeNeighbor to one. Where σ_i is the unary operation on the SuperHyperVertices of the SuperHyperGraph to assign the determinacy, the indeterminacy and the neutrality, for $i = 1, 2, 3$, respectively.

Corollary 29. *Assume a neutrosophic SuperHyperGraph on the same identical letter of the alphabet. Then the notion of neutrosophic SuperHyperMatching and neutrosophic SuperHyperMatching coincide.*

Corollary 30. *Assume a neutrosophic SuperHyperGraph on the same identical letter of the alphabet. Then a consecutive sequence of the SuperHyperVertices is a neutrosophic SuperHyperMatching if and only if it's a neutrosophic SuperHyperMatching.*

Corollary 31. *Assume a neutrosophic SuperHyperGraph on the same identical letter of the alphabet. Then a consecutive sequence of the SuperHyperVertices is a strongest SuperHyperCycle if and only if it's a longest SuperHyperCycle.*

Corollary 32. *Assume SuperHyperClasses of a neutrosophic SuperHyperGraph on the same identical letter of the alphabet. Then its neutrosophic SuperHyperMatching is its neutrosophic SuperHyperMatching and reversely.*

Corollary 33. *Assume a neutrosophic SuperHyperPath(-/SuperHyperCycle, SuperHyperStar, SuperHyperBipartite, SuperHyperMultipartite, SuperHyperWheel) on the same identical letter of the alphabet. Then its neutrosophic SuperHyperMatching is its neutrosophic SuperHyperMatching and reversely.*

Corollary 34. *Assume a neutrosophic SuperHyperGraph. Then its neutrosophic SuperHyperMatching isn't well-defined if and only if its neutrosophic SuperHyperMatching isn't well-defined.*

Corollary 35. *Assume SuperHyperClasses of a neutrosophic SuperHyperGraph. Then its neutrosophic SuperHyperMatching isn't well-defined if and only if its neutrosophic SuperHyperMatching isn't well-defined.*

Corollary 36. *Assume a neutrosophic SuperHyperPath(-/SuperHyperCycle, SuperHyperStar, SuperHyperBipartite, SuperHyperMultipartite, SuperHyperWheel). Then its neutrosophic SuperHyperMatching isn't well-defined if and only if its neutrosophic SuperHyperMatching isn't well-defined.*

Corollary 37. *Assume a neutrosophic SuperHyperGraph. Then its neutrosophic SuperHyperMatching is well-defined if and only if its neutrosophic SuperHyperMatching is well-defined.*

Corollary 38. *Assume SuperHyperClasses of a neutrosophic SuperHyperGraph. Then its neutrosophic SuperHyperMatching is well-defined if and only if its neutrosophic SuperHyperMatching is well-defined.*

Corollary 39. *Assume a neutrosophic SuperHyperPath(-/SuperHyperCycle, SuperHyperStar, SuperHyperBipartite, SuperHyperMultipartite, SuperHyperWheel). Then its neutrosophic SuperHyperMatching is well-defined if and only if its neutrosophic SuperHyperMatching is well-defined.*

Proposition 40. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph. Then V is*

(i) : *the dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *the strong dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *the connected dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : *the δ-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *the strong δ-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *the connected δ-dual SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 41. *Let $NTG : (V, E, \sigma, \mu)$ be a neutrosophic SuperHyperGraph. Then $\emptyset$ is*

(i) : *the SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *the strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *the connected defensive SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : *the δ-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *the strong δ-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *the connected δ-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 42. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph. Then an independent SuperHyperSet is*

(i) : *the SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *the strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *the connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : *the δ-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *the strong δ-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *the connected δ-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 43. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperUniform SuperHyperGraph which is a SuperHyperCycle/SuperHyperPath. Then V is a maximal*

(i) : *SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : *$\mathcal{O}(ESHG)$-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong $\mathcal{O}(ESHG)$-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected $\mathcal{O}(ESHG)$-SuperHyperDefensive neutrosophic SuperHyperMatching;*

Where the exterior SuperHyperVertices and the interior SuperHyperVertices coincide.

Proposition 44. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph which is a SuperHyperUniform SuperHyperWheel. Then V is a maximal*

(i) : *dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : *$\mathcal{O}(ESHG)$-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong $\mathcal{O}(ESHG)$-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected $\mathcal{O}(ESHG)$-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*

Where the exterior SuperHyperVertices and the interior SuperHyperVertices coincide.

Proposition 45. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperUniform SuperHyperGraph which is a SuperHyperCycle/SuperHyperPath. Then the number of*

(i) : *the neutrosophic SuperHyperMatching;*
(ii) : *the neutrosophic SuperHyperMatching;*
(iii) : *the connected neutrosophic SuperHyperMatching;*
(iv) : *the $\mathcal{O}(ESHG)$-neutrosophic SuperHyperMatching;*
(v) : *the strong $\mathcal{O}(ESHG)$-neutrosophic SuperHyperMatching;*
(vi) : *the connected $\mathcal{O}(ESHG)$-neutrosophic SuperHyperMatching.*

is one and it's only V. Where the exterior SuperHyperVertices and the interior SuperHyperVertices coincide.

Proposition 46. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperUniform SuperHyperGraph which is a SuperHyperWheel. Then the number of*

(i) : *the dual neutrosophic SuperHyperMatching;*

(ii) : *the dual neutrosophic SuperHyperMatching;*
(iii) : *the dual connected neutrosophic SuperHyperMatching;*
(iv) : *the dual $\mathcal{O}(ESHG)$-neutrosophic SuperHyperMatching;*
(v) : *the strong dual $\mathcal{O}(ESHG)$-neutrosophic SuperHyperMatching;*
(vi) : *the connected dual $\mathcal{O}(ESHG)$-neutrosophic SuperHyperMatching.*

is one and it's only V. Where the exterior SuperHyperVertices and the interior SuperHyperVertices coincide.

Proposition 47. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperUniform SuperHyperGraph which is a SuperHyperStar/SuperHyperComplete SuperHyperBipartite/SuperHyperComplete SuperHyperMultipartite. Then a SuperHyperSet contains [the SuperHyperCenter and] the half of multiplying r with the number of all the SuperHyperEdges plus one of all the SuperHyperVertices is a*

(i) : *dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 48. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperUniform SuperHyperGraph which is a SuperHyperStar/SuperHyperComplete SuperHyperBipartite/SuperHyperComplete SuperHyperMultipartite. Then a SuperHyperSet contains the half of multiplying r with the number of all the SuperHyperEdges plus one of all the SuperHyperVertices in the biggest SuperHyperPart is a*

(i) : *SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : *δ-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong δ-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected δ-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 49. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperUniform SuperHyperGraph which is a SuperHyperStar/SuperHyperComplete SuperHyperBipartite/SuperHyperComplete SuperHyperMultipartite. Then Then the number of*

(i) : *dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive neutrosophic SuperHyperMatching.*

is one and it's only S, a SuperHyperSet contains [the SuperHyperCenter and] the half of multiplying r with the number of all the SuperHyperEdges plus one of all the SuperHyperVertices. Where the exterior SuperHyperVertices and the interior SuperHyperVertices coincide.

Proposition 50. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph. The number of connected component is $|V - S|$ if there's a SuperHyperSet which is a dual*

(i) : *SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : *neutrosophic SuperHyperMatching;*
(v) : *strong 1-SuperHyperDefensive neutrosophic SuperHyperMatching;*

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(vi) : *connected 1-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 51. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph. Then the number is at most $\mathcal{O}(ESHG)$ and the neutrosophic number is at most $\mathcal{O}_n(ESHG)$.*

Proposition 52. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph which is SuperHyperComplete. The number is $\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1$ and the neutrosophic number is $\min \Sigma_{v \in \{v_1, v_2, \cdots, v_t\}_{t > \frac{\mathcal{O}(ESHG:(V,E))}{2}} \subseteq V} \sigma(v)$, in the setting of dual*

(i) : *SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 53. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph which is $\emptyset$. The number is 0 and the neutrosophic number is 0, for an independent SuperHyperSet in the setting of dual*

(i) : *SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : 0*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong* 0*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected* 0*-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 54. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph which is SuperHyperComplete. Then there's no independent SuperHyperSet.*

Proposition 55. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph which is SuperHyperCycle/SuperHyperPath/SuperHyperWheel. The number is $\mathcal{O}(ESHG : (V, E))$ and the neutrosophic number is $\mathcal{O}_n(ESHG : (V, E))$, in the setting of a dual*

(i) : *SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : $\mathcal{O}(ESHG : (V, E))$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong* $\mathcal{O}(ESHG : (V, E))$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected* $\mathcal{O}(ESHG : (V, E))$*-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 56. *Let $ESHG : (V, E)$ be a neutrosophic SuperHyperGraph which is SuperHyperStar/complete SuperHyperBipartite/complete SuperHyperMultiPartite. The number is $\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1$ and the neutrosophic number is $\min \Sigma_{v \in \{v_1, v_2, \cdots, v_t\}_{t > \frac{\mathcal{O}(ESHG:(V,E))}{2}} \subseteq V} \sigma(v)$, in the setting of a dual*

(i) : *SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) : $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(v) : *strong* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(vi) : *connected* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 57. *Let $\mathcal{NSHF} : (V, E)$ be a SuperHyperFamily of the ESHGs : (V, E) neutrosophic SuperHyperGraphs which are from one-type SuperHyperClass which the result is obtained for the individuals. Then the results also hold for the SuperHyperFamily $\mathcal{NSHF} : (V, E)$ of these specific SuperHyperClasses of the neutrosophic SuperHyperGraphs.*

Proposition 58. *Let ESHG : (V, E) be a strong neutrosophic SuperHyperGraph. If S is a dual SuperHyperDefensive neutrosophic SuperHyperMatching, then $\forall v \in V \setminus S$, $\exists x \in S$ such that*

(i) $v \in N_s(x)$;
(ii) $vx \in E$.

Proposition 59. *Let ESHG : (V, E) be a strong neutrosophic SuperHyperGraph. If S is a dual SuperHyperDefensive neutrosophic SuperHyperMatching, then*

(i) *S is SuperHyperDominating set;*
(ii) *there's $S \subseteq S'$ such that $|S'|$ is SuperHyperChromatic number.*

Proposition 60. *Let ESHG : (V, E) be a strong neutrosophic SuperHyperGraph. Then*

(i) $\Gamma \leq \mathcal{O}$;
(ii) $\Gamma_s \leq \mathcal{O}_n$.

Proposition 61. *Let ESHG : (V, E) be a strong neutrosophic SuperHyperGraph which is connected. Then*

(i) $\Gamma \leq \mathcal{O} - 1$;
(ii) $\Gamma_s \leq \mathcal{O}_n - \Sigma_{i=1}^3 \sigma_i(x)$.

Proposition 62. *Let ESHG : (V, E) be an odd SuperHyperPath. Then*

(i) *the SuperHyperSet $S = \{v_2, v_4, \cdots, v_{n-1}\}$ is a dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor + 1$ *and corresponded SuperHyperSet is* $S = \{v_2, v_4, \cdots, v_{n-1}\}$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S = \{v_2, v_4, \cdots, v_{n-1}\}} \Sigma_{i=1}^3 \sigma_i(s), \Sigma_{s \in S = \{v_1, v_3, \cdots, v_{n-1}\}} \Sigma_{i=1}^3 \sigma_i(s)\}$;
(iv) *the SuperHyperSets $S_1 = \{v_2, v_4, \cdots, v_{n-1}\}$ and $S_2 = \{v_1, v_3, \cdots, v_{n-1}\}$ are only a dual neutrosophic SuperHyperMatching.*

Proposition 63. *Let ESHG : (V, E) be an even SuperHyperPath. Then*

(i) *the set $S = \{v_2, v_4, \cdots .v_n\}$ is a dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor$ *and corresponded SuperHyperSets are* $\{v_2, v_4, \cdots .v_n\}$ *and* $\{v_1, v_3, \cdots .v_{n-1}\}$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S = \{v_2, v_4, \cdots, v_n\}} \Sigma_{i=1}^3 \sigma_i(s), \Sigma_{s \in S = \{v_1, v_3, \cdots .v_{n-1}\}} \Sigma_{i=1}^3 \sigma_i(s)\}$;
(iv) *the SuperHyperSets $S_1 = \{v_2, v_4, \cdots .v_n\}$ and $S_2 = \{v_1, v_3, \cdots .v_{n-1}\}$ are only dual neutrosophic SuperHyperMatching.*

Proposition 64. *Let ESHG : (V, E) be an even SuperHyperCycle. Then*

(i) *the SuperHyperSet $S = \{v_2, v_4, \cdots, v_n\}$ is a dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor$ *and corresponded SuperHyperSets are* $\{v_2, v_4, \cdots, v_n\}$ *and* $\{v_1, v_3, \cdots, v_{n-1}\}$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S = \{v_2, v_4, \cdots, v_n\}} \sigma(s), \Sigma_{s \in S = \{v_1, v_3, \cdots, v_{n-1}\}} \sigma(s)\}$;
(iv) *the SuperHyperSets $S_1 = \{v_2, v_4, \cdots, v_n\}$ and $S_2 = \{v_1, v_3, \cdots, v_{n-1}\}$ are only dual neutrosophic SuperHyperMatching.*

Proposition 65. *Let ESHG : (V, E) be an odd SuperHyperCycle. Then*

(i) *the SuperHyperSet $S = \{v_2, v_4, \cdots, v_{n-1}\}$ is a dual SuperHyperDefensive neutrosophic SuperHyperMatching;*

(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor + 1$ *and corresponded SuperHyperSet is* $S = \{v_2, v_4, \cdots, v_{n-1}\}$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S = \{v_2, v_4, \cdots .v_{n-1}\}} \Sigma_{i=1}^3 \sigma_i(s), \Sigma_{s \in S = \{v_1, v_3, \cdots .v_{n-1}\}} \Sigma_{i=1}^3 \sigma_i(s)\}$;
(iv) *the SuperHyperSets* $S_1 = \{v_2, v_4, \cdots .v_{n-1}\}$ *and* $S_2 = \{v_1, v_3, \cdots .v_{n-1}\}$ *are only dual neutrosophic SuperHyperMatching.*

Proposition 66. *Let* $ESHG : (V, E)$ *be SuperHyperStar. Then*

(i) *the SuperHyperSet* $S = \{c\}$ *is a dual maximal neutrosophic SuperHyperMatching;*
(ii) $\Gamma = 1$;
(iii) $\Gamma_s = \Sigma_{i=1}^3 \sigma_i(c)$;
(iv) *the SuperHyperSets* $S = \{c\}$ *and* $S \subset S'$ *are only dual neutrosophic SuperHyperMatching.*

Proposition 67. *Let* $ESHG : (V, E)$ *be SuperHyperWheel. Then*

(i) *the SuperHyperSet* $S = \{v_1, v_3\} \cup \{v_6, v_9 \cdots, v_{i+6}, \cdots, v_n\}_{i=1}^{6+3(i-1) \leq n}$ *is a dual maximal SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\Gamma = |\{v_1, v_3\} \cup \{v_6, v_9 \cdots, v_{i+6}, \cdots, v_n\}_{i=1}^{6+3(i-1) \leq n}|$;
(iii) $\Gamma_s = \Sigma_{\{v_1, v_3\} \cup \{v_6, v_9 \cdots, v_{i+6}, \cdots, v_n\}_{i=1}^{6+3(i-1) \leq n}} \Sigma_{i=1}^3 \sigma_i(s)$;
(iv) *the SuperHyperSet* $\{v_1, v_3\} \cup \{v_6, v_9 \cdots, v_{i+6}, \cdots, v_n\}_{i=1}^{6+3(i-1) \leq n}$ *is only a dual maximal SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 68. *Let* $ESHG : (V, E)$ *be an odd SuperHyperComplete. Then*

(i) *the SuperHyperSet* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor + 1}$ *is a dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor + 1$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S} \Sigma_{i=1}^3 \sigma_i(s)\}_{S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor + 1}}$;
(iv) *the SuperHyperSet* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor + 1}$ *is only a dual SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 69. *Let* $ESHG : (V, E)$ *be an even SuperHyperComplete. Then*

(i) *the SuperHyperSet* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor}$ *is a dual SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S} \Sigma_{i=1}^3 \sigma_i(s)\}_{S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor}}$;
(iv) *the SuperHyperSet* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor}$ *is only a dual maximal SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 70. *Let* $\mathcal{NSHF} : (V, E)$ *be a m-SuperHyperFamily of neutrosophic SuperHyperStars with common neutrosophic SuperHyperVertex SuperHyperSet. Then*

(i) *the SuperHyperSet* $S = \{c_1, c_2, \cdots, c_m\}$ *is a dual SuperHyperDefensive neutrosophic SuperHyperMatching for* $\mathcal{NSHF}$;
(ii) $\Gamma = m$ *for* $\mathcal{NSHF} : (V, E)$;
(iii) $\Gamma_s = \Sigma_{i=1}^m \Sigma_{j=1}^3 \sigma_j(c_i)$ *for* $\mathcal{NSHF} : (V, E)$;
(iv) *the SuperHyperSets* $S = \{c_1, c_2, \cdots, c_m\}$ *and* $S \subset S'$ *are only dual neutrosophic SuperHyperMatching for* $\mathcal{NSHF} : (V, E)$.

Proposition 71. *Let* $\mathcal{NSHF} : (V, E)$ *be an m-SuperHyperFamily of odd SuperHyperComplete SuperHyperGraphs with common neutrosophic SuperHyperVertex SuperHyperSet. Then*

(i) *the SuperHyperSet* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor + 1}$ *is a dual maximal SuperHyperDefensive neutrosophic SuperHyperMatching for* $\mathcal{NSHF}$;

(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor + 1$ *for* $\mathcal{NSHF} : (V, E)$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S} \Sigma_{i=1}^{3} \sigma_i(s)\}_{S=\{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor + 1}}$ *for* $\mathcal{NSHF} : (V, E)$;
(iv) *the SuperHyperSets* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor + 1}$ *are only a dual maximal neutrosophic SuperHyperMatching for* $\mathcal{NSHF} : (V, E)$.

Proposition 72. *Let* $\mathcal{NSHF} : (V, E)$ *be a m-SuperHyperFamily of even SuperHyperComplete SuperHyperGraphs with common neutrosophic SuperHyperVertex SuperHyperSet. Then*

(i) *the SuperHyperSet* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor}$ *is a dual SuperHyperDefensive neutrosophic SuperHyperMatching for* $\mathcal{NSHF} : (V, E)$;
(ii) $\Gamma = \lfloor \frac{n}{2} \rfloor$ *for* $\mathcal{NSHF} : (V, E)$;
(iii) $\Gamma_s = \min\{\Sigma_{s \in S} \Sigma_{i=1}^{3} \sigma_i(s)\}_{S=\{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor}}$ *for* $\mathcal{NSHF} : (V, E)$;
(iv) *the SuperHyperSets* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor}$ *are only dual maximal neutrosophic SuperHyperMatching for* $\mathcal{NSHF} : (V, E)$.

Proposition 73. *Let* $ESHG : (V, E)$ *be a strong neutrosophic SuperHyperGraph. Then following statements hold;*

(i) *if* $s \geq t$ *and a SuperHyperSet* S *of SuperHyperVertices is an t-SuperHyperDefensive neutrosophic SuperHyperMatching, then* S *is an s-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) *if* $s \leq t$ *and a SuperHyperSet* S *of SuperHyperVertices is a dual t-SuperHyperDefensive neutrosophic SuperHyperMatching, then* S *is a dual s-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 74. *Let* $ESHG : (V, E)$ *be a strong neutrosophic SuperHyperGraph. Then following statements hold;*

(i) *if* $s \geq t + 2$ *and a SuperHyperSet* S *of SuperHyperVertices is an t-SuperHyperDefensive neutrosophic SuperHyperMatching, then* S *is an s-SuperHyperPowerful neutrosophic SuperHyperMatching;*
(ii) *if* $s \leq t$ *and a SuperHyperSet* S *of SuperHyperVertices is a dual t-SuperHyperDefensive neutrosophic SuperHyperMatching, then* S *is a dual s-SuperHyperPowerful neutrosophic SuperHyperMatching.*

Proposition 75. *Let* $ESHG : (V, E)$ *be a[an] [r-]SuperHyperUniform-strong-neutrosophic SuperHyperGraph. Then following statements hold;*

(i) *if* $\forall a \in S,\ |N_s(a) \cap S| < \lfloor \frac{r}{2} \rfloor + 1$, *then* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) *if* $\forall a \in V \setminus S,\ |N_s(a) \cap S| > \lfloor \frac{r}{2} \rfloor + 1$, *then* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) *if* $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$, *then* $ESHG : (V, E)$ *is an r-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) *if* $\forall a \in V \setminus S,\ |N_s(a) \cap V \setminus S| = 0$, *then* $ESHG : (V, E)$ *is a dual r-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 76. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-neutrosophic SuperHyperGraph. Then following statements hold;*

(i) $\forall a \in S,\ |N_s(a) \cap S| < \lfloor \frac{r}{2} \rfloor + 1$ *if* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\forall a \in V \setminus S,\ |N_s(a) \cap S| > \lfloor \frac{r}{2} \rfloor + 1$ *if* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$ *if* $ESHG : (V, E)$ *is an r-SuperHyperDefensive neutrosophic SuperHyperMatching;*

(iv) $\forall a \in V \setminus S,\ |N_s(a) \cap V \setminus S| = 0$ *if* $ESHG : (V, E)$ *is a dual r-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 77. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-neutrosophic SuperHyperGraph which is a SuperHyperComplete. Then following statements hold;*

(i) $\forall a \in S,\ |N_s(a) \cap S| < \lfloor \frac{\mathcal{O}-1}{2} \rfloor + 1$ *if* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\forall a \in V \setminus S,\ |N_s(a) \cap S| > \lfloor \frac{\mathcal{O}-1}{2} \rfloor + 1$ *if* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$ *if* $ESHG : (V, E)$ *is an* $(\mathcal{O} - 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) $\forall a \in V \setminus S,\ |N_s(a) \cap V \setminus S| = 0$ *if* $ESHG : (V, E)$ *is a dual* $(\mathcal{O} - 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 78. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-neutrosophic SuperHyperGraph which is a SuperHyperComplete. Then following statements hold;*

(i) *if* $\forall a \in S,\ |N_s(a) \cap S| < \lfloor \frac{\mathcal{O}-1}{2} \rfloor + 1$, *then* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) *if* $\forall a \in V \setminus S,\ |N_s(a) \cap S| > \lfloor \frac{\mathcal{O}-1}{2} \rfloor + 1$, *then* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) *if* $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$, *then* $ESHG : (V, E)$ *is* $(\mathcal{O} - 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) *if* $\forall a \in V \setminus S,\ |N_s(a) \cap V \setminus S| = 0$, *then* $ESHG : (V, E)$ *is a dual* $(\mathcal{O} - 1)$*-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 79. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-neutrosophic SuperHyperGraph which is SuperHyperCycle. Then following statements hold;*

(i) $\forall a \in S,\ |N_s(a) \cap S| < 2$ *if* $ESHG : (V, E))$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) $\forall a \in V \setminus S,\ |N_s(a) \cap S| > 2$ *if* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$ *if* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) $\forall a \in V \setminus S,\ |N_s(a) \cap V \setminus S| = 0$ *if* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching.*

Proposition 80. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-neutrosophic SuperHyperGraph which is SuperHyperCycle. Then following statements hold;*

(i) *if* $\forall a \in S,\ |N_s(a) \cap S| < 2$, *then* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(ii) *if* $\forall a \in V \setminus S,\ |N_s(a) \cap S| > 2$, *then* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iii) *if* $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$, *then* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive neutrosophic SuperHyperMatching;*
(iv) *if* $\forall a \in V \setminus S,\ |N_s(a) \cap V \setminus S| = 0$, *then* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive neutrosophic SuperHyperMatching.*

7. Neutrosophic Problems and Neutrosophic Questions

In what follows, some "neutrosophic problems" and some "neutrosophic questions" are neutrosophicly proposed.
The SuperHyperMatching and the neutrosophic SuperHyperMatching are neutrosophicly defined on a real-world neutrosophic application, titled "Cancer's neutrosophic recognitions".

Question 81. *Which the else neutrosophic SuperHyperModels could be defined based on Cancer's neutrosophic recognitions?*

Question 82. *Are there some neutrosophic SuperHyperNotions related to SuperHyperMatching and the neutrosophic SuperHyperMatching?*

Question 83. *Are there some neutrosophic Algorithms to be defined on the neutrosophic SuperHyperModels to compute them neutrosophicly?*

Question 84. *Which the neutrosophic SuperHyperNotions are related to beyond the SuperHyperMatching and the neutrosophic SuperHyperMatching?*

Problem 85. *The SuperHyperMatching and the neutrosophic SuperHyperMatching do neutrosophicly a neutrosophic SuperHyperModel for the Cancer's neutrosophic recognitions and they're based neutrosophicly on neutrosophic SuperHyperMatching, are there else neutrosophicly?*

Problem 86. *Which the fundamental neutrosophic SuperHyperNumbers are related to these neutrosophic SuperHyperNumbers types-results?*

Problem 87. *What's the independent research based on Cancer's neutrosophic recognitions concerning the multiple types of neutrosophic SuperHyperNotions?*

Table 1. An Overlook On This Research And Beyond

Advantages	Limitations
1. Redefining Neutrosophic SuperHyperGraph	1. General Results
2. SuperHyperMatching	
3. Neutrosophic SuperHyperMatching	2. Other SuperHyperNumbers
4. Modeling of Cancer's Recognitions	
5. SuperHyperClasses	3. SuperHyperFamilies

In the Table (1), benefits and avenues for this research are, figured out pointed out and spoken out.

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