Article

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Mohammadesmail Nikfar *

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The Shift Paradigm to Classify Separately the Cells and Affected Cells Toward the Totality Under Cancer's Recognition by New Multiple Definitions On the Sets Polynomials Alongside Numbers In The (Neutrosophic) SuperHyperMatching Theory Based on SuperHyperGraph and Neutrosophic SuperHyperGraph

Mohammadesmail Nikfar

DrHenryGarrett@gmail.com

Abstract: In this research, assume a SuperHyperGraph. Then 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; 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; an extreme 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 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; 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; 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; 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; 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; 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. Assume a SuperHyperGraph. Then $\delta-$SuperHyperMatching is a maximal of SuperHyperVertices with a maximum cardinality such that either of the following expressions hold for the (neutrosophic) cardinalities of SuperHyperNeighbors of $s \in S$: there are $|S \cap N(s)| > |S \cap (V \setminus N(s))| + \delta$; and $|S \cap N(s)| < |S \cap (V \setminus N(s))| + \delta$. The first Expression, holds if S is an $\delta-$SuperHyperOffensive. And the second Expression, holds if S is an $\delta-$SuperHyperDefensive; 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 $s \in S$ there are: $|S \cap N(s)|_{neutrosophic} > |S \cap (V \setminus N(s))|_{neutrosophic} + \delta$; and $|S \cap N(s)|_{neutrosophic} < |S \cap (V \setminus N(s))|_{neutrosophic} + \delta$. The first Expression, holds if S is a neutrosophic $\delta-$SuperHyperOffensive. And the second Expression, holds if S is a neutrosophic $\delta-$SuperHyperDefensive 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 Extreme SuperHyperMatching theory, SuperHyperGraphs, and Neutrosophic SuperHyperGraphs theory are proposed.

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

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

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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, 2638 and 3363 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 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 <u>maximal</u> neutrosophic of SuperHyperVertices with <u>maximum</u> 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. Extreme SuperHyperMatching

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

<u>**"neutrosophic SuperHyperMatching"**</u>

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

extreme SuperHyperMatching,

is only and only S in a connected neutrosophic SuperHyperGraph $ESHG : (V, E)$ with a illustrated SuperHyperModeling. It's also, an extreme free-triangle SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme SuperHyperMatching amid those obvious[non-obvious] simple extreme 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 extreme SuperHyperNotion, namely, extreme SuperHyperMatching, is up. E_1 and E_3 are some empty extreme SuperHyperEdges but E_2 is a loop extreme SuperHyperEdge and E_4 is an extreme SuperHyperEdge. Thus in the terms of extreme SuperHyperNeighbor, there's only one extreme SuperHyperEdge, namely, E_4. The extreme SuperHyperVertex, V_3 is extreme isolated means that there's no extreme SuperHyperEdge has it as an extreme endpoint. Thus the extreme SuperHyperVertex, V_3, **is** excluded in every given extreme SuperHyperMatching.

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

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

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

$\mathcal{C}(NSHG) = \{E_4\}$ is an extreme SuperHyperMatching.
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Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

- On the Figure (2), the SuperHyperNotion, namely, SuperHyperMatching, is up. E_1 and E_3 SuperHyperMatching are some empty SuperHyperEdges but E_2 is a loop SuperHyperEdge and E_4 is a SuperHyperEdge. Thus in the terms of SuperHyperNeighbor, there's only one SuperHyperEdge, namely, E_4. The SuperHyperVertex, V_3 is isolated means that there's no SuperHyperEdge has it as an endpoint. Thus the extreme SuperHyperVertex, V_3, **is** excluded in every given extreme SuperHyperMatching.

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

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

$\mathcal{C}(NSHG) = \{E_4\}$ is an extreme SuperHyperMatching.
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Is the non-obvious simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperEdges[SuperHyperVertices],

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

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

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"neutrosophic SuperHyperMatching"

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

extreme SuperHyperMatching,

is only and only

$\mathcal{C}(NSHG) = \{E_4\}$ is an extreme SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an extreme SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an extreme R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an extreme 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 extreme SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an extreme SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an extreme R-SuperHyperMatching.
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The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4\}$ is an extreme SuperHyperMatching.
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is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of the extreme SuperHyperEdges[SuperHyperVertices],

$\mathcal{C}(NSHG) = \{E_4\}$ is an extreme SuperHyperMatching.
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$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an extreme R-SuperHyperMatching.
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is an **extreme SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperEdges[SuperHyperVertices] such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices. There are not only **two** extreme SuperHyperVertices **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

$\mathcal{C}(NSHG) = \{E_4\}$ is an extreme SuperHyperMatching.
$\mathcal{C}(NSHG) = z$ is an extreme SuperHyperMatching SuperHyperPolynomial.
$\mathcal{C}(NSHG) = \{V_1, V_2, V_4\}$ is an extreme R-SuperHyperMatching.
$\mathcal{C}(NSHG) = z^3$ is an extreme 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 $\{N, V_1, V_2, V_3, F\}$.

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

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

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

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

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

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

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

is an **extreme SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperEdges[SuperHyperVertices] such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices. There are are only **same** extreme SuperHyperVertices **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **same** extreme SuperHyperVertices. But the extreme SuperHyperSet of the extreme SuperHyperEdges[SuperHyperVertices],

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

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

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

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

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

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

SuperHyperEdge for all extreme SuperHyperVertices. There are only less than same extreme SuperHyperVertices **inside** the intended extreme SuperHyperSet,

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

Thus the obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, is:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

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

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

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

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

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

$$\mathcal{C}(NSHG)_{ExtremeSuperHyperMatching} = \{E_i\}_{i=12}^{22}.$$
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- On the Figure (7), the SuperHyperNotion, namely, SuperHyperMatching, is up. The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices],

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

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

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

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

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

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

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

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

Thus the non-obvious extreme SuperHyperMatching,

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

Is the extreme SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_1\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_2\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = 2z.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{3}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^2.$$

In a connected extreme SuperHyperGraph $ESHG : (V, E)$. It's noted that this extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme 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 extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices],

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

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

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

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

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

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

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

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$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^3.$$
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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = 2z^{15}.$$

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

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

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

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

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
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Is an extreme SuperHyperMatching $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is the extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge for some extreme SuperHyperVertices given by that extreme type-SuperHyperSet called the extreme SuperHyperMatching **and** it's an extreme **SuperHyperMatching**. Since it**'s the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperEdges[SuperHyperVertices] such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices. There aren't only less than three extreme SuperHyperVertices **inside** the intended extreme SuperHyperSet,

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_{2i-1}\}_{i=1}^{6}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_{2i}\}_{i=1}^{6}.$$
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Does includes only less than three SuperHyperVertices in a connected extreme SuperHyperGraph $ESHG : (V, E)$. It's interesting to mention that the only non-obvious simple neutrosophic type-SuperHyperSet called the

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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s + bz^t.$$

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

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_6\}.$$
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is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of the extreme SuperHyperEdges[SuperHyperVertices],

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

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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

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

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_6\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$
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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_6\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial} = z^6.$$
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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

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

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

Is the extreme SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching} = \{E_6\}.$$
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$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^s.$$

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

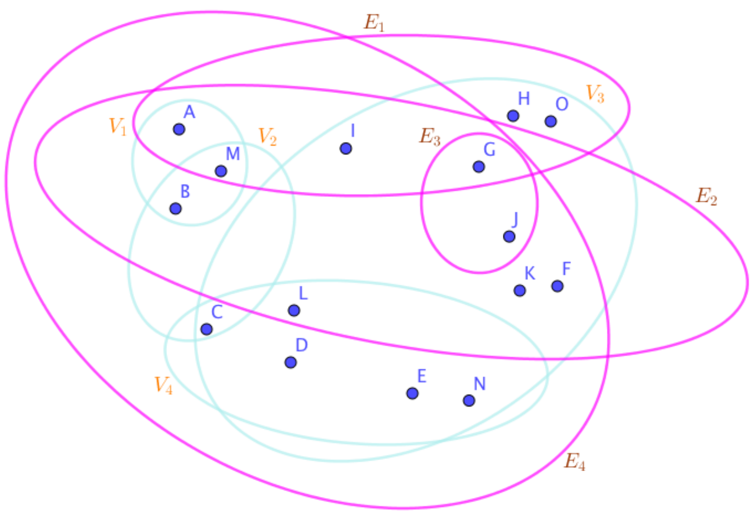

Figure 1. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

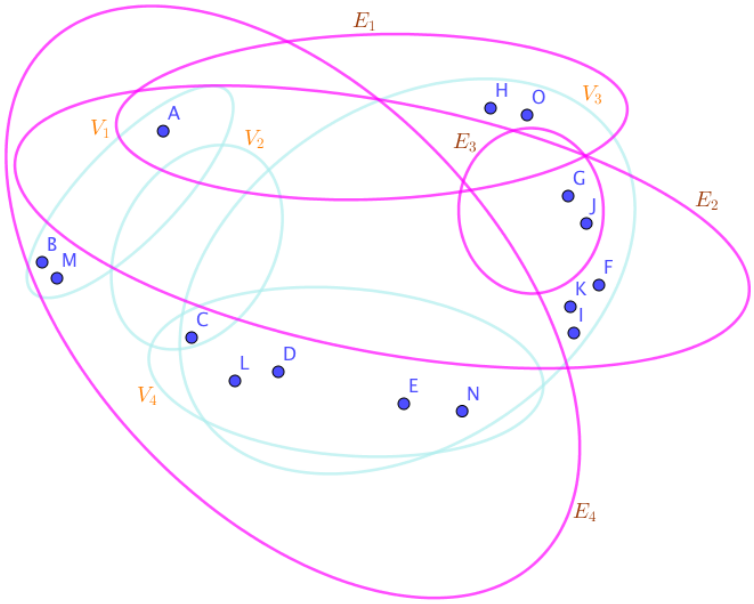

Figure 2. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

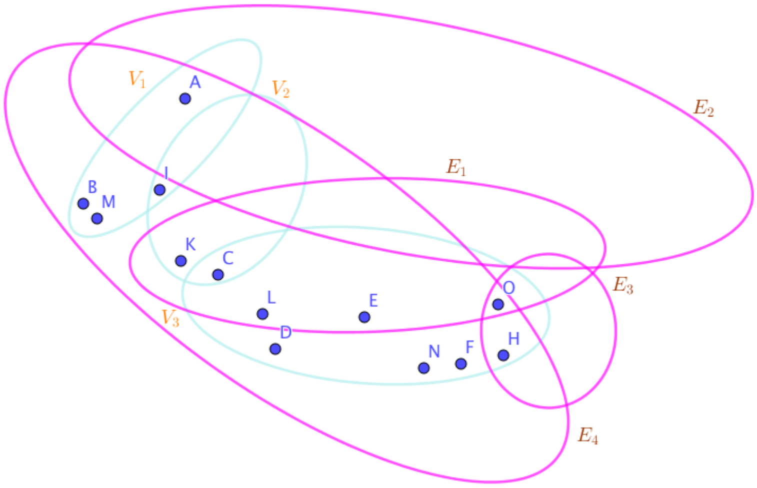

Figure 3. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

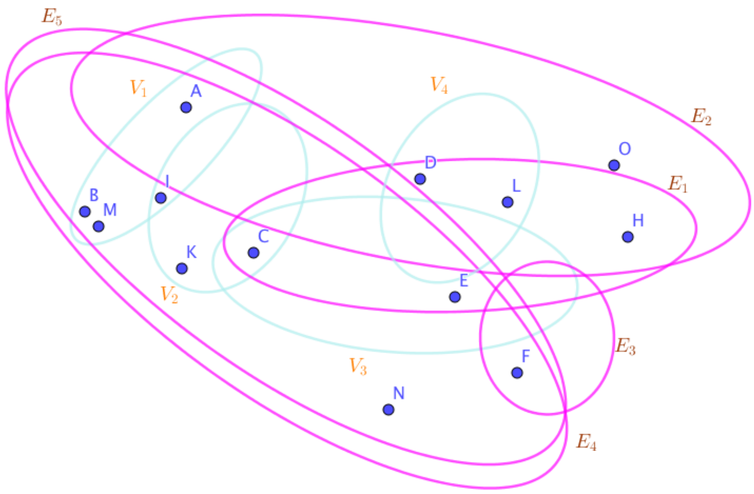

Figure 4. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

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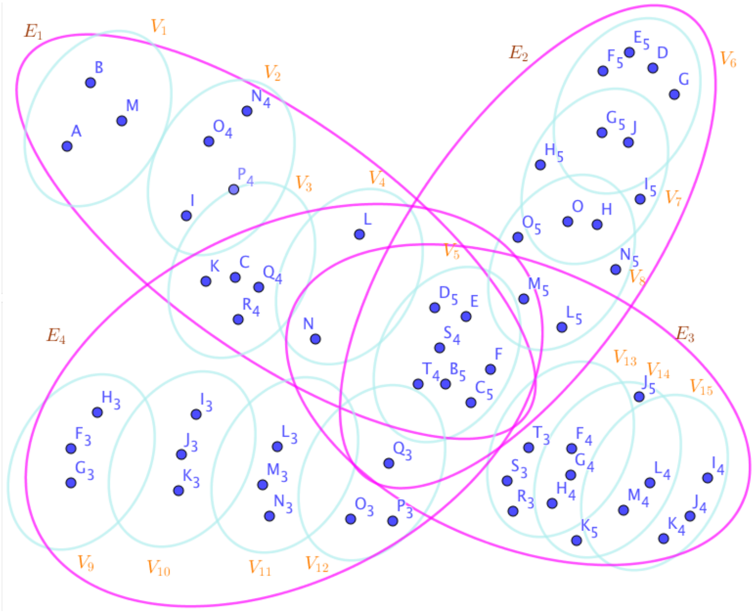

Figure 5. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

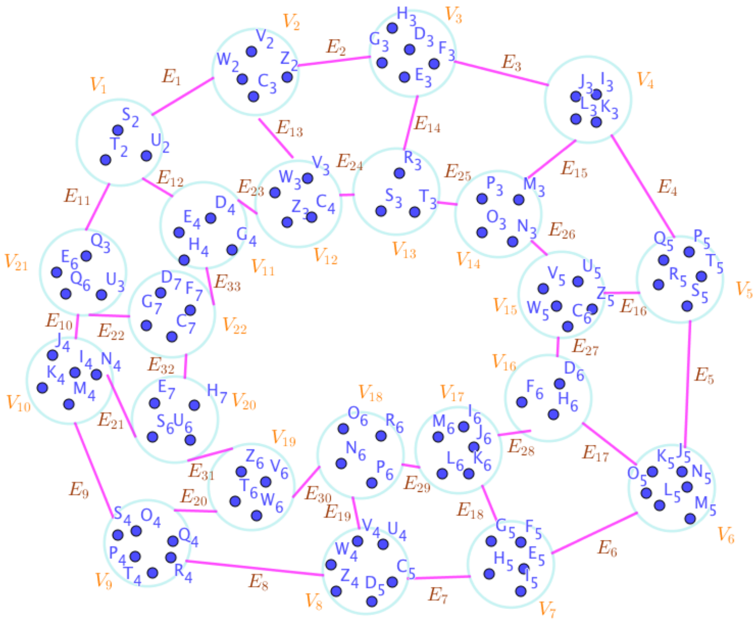

Figure 6. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

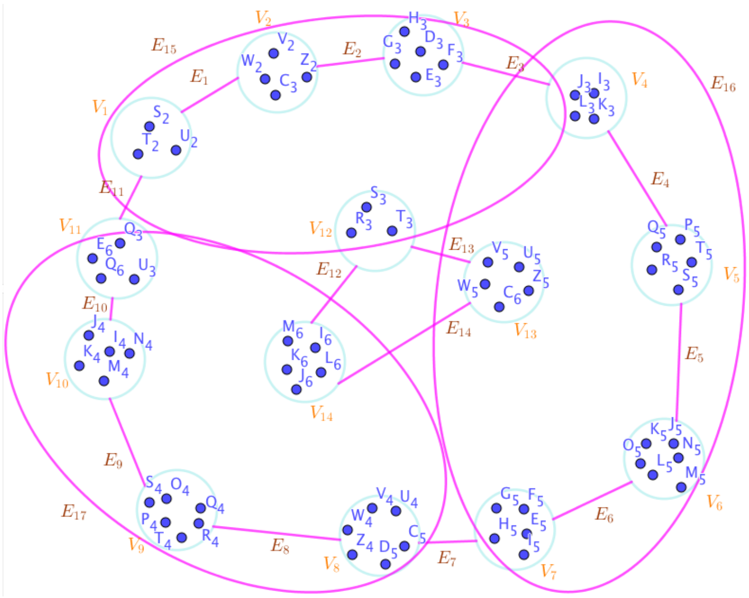

Figure 7. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

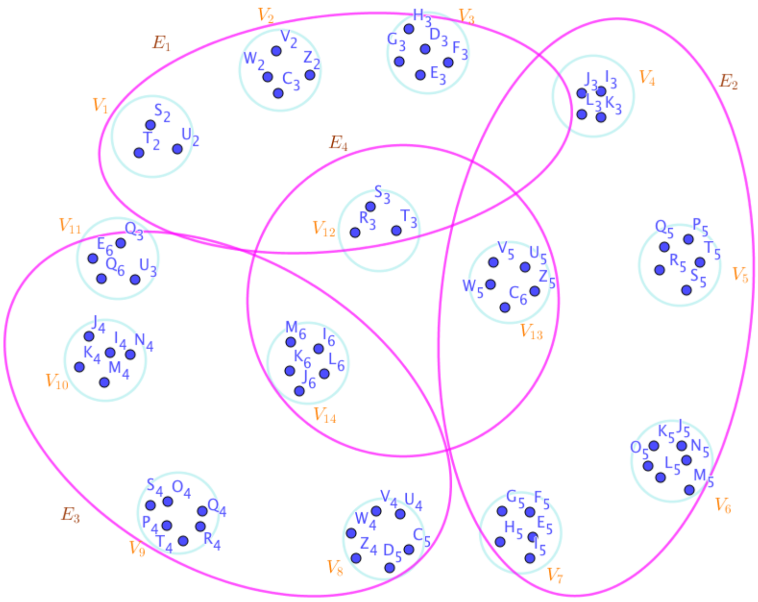

Figure 8. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

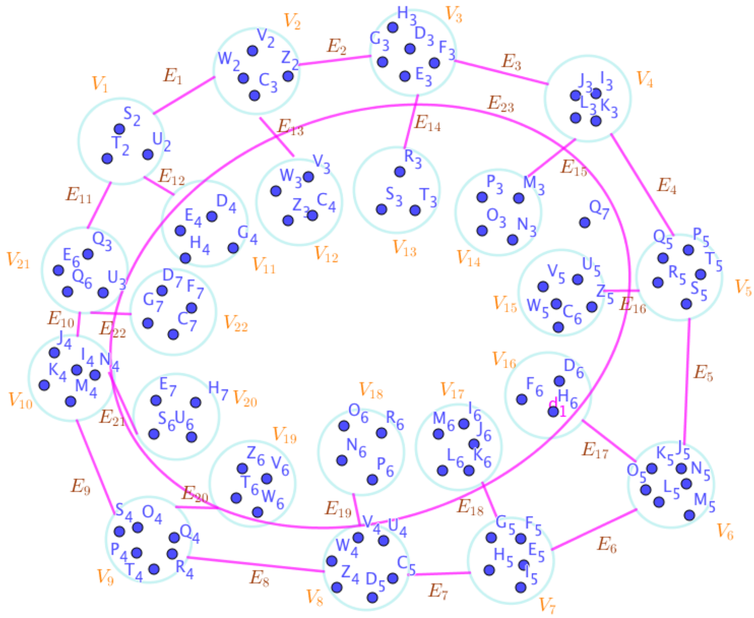

Figure 9. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

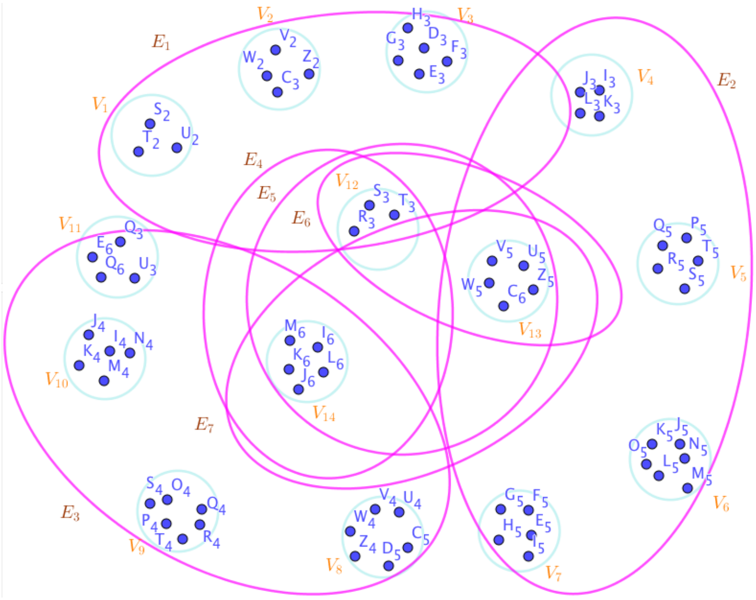

Figure 10. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

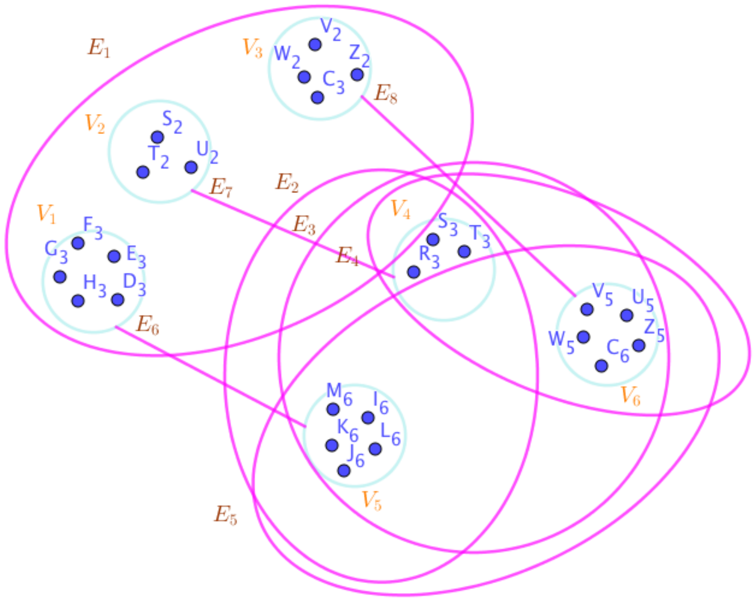

Figure 11. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

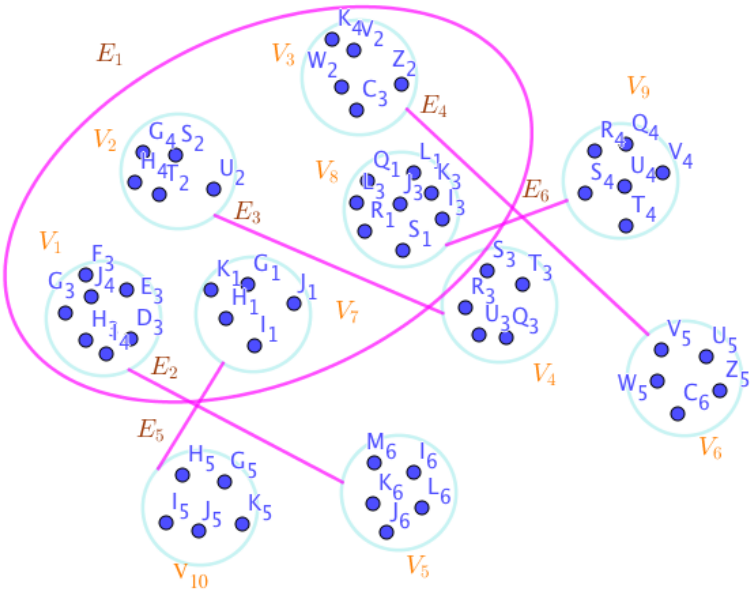

Figure 12. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

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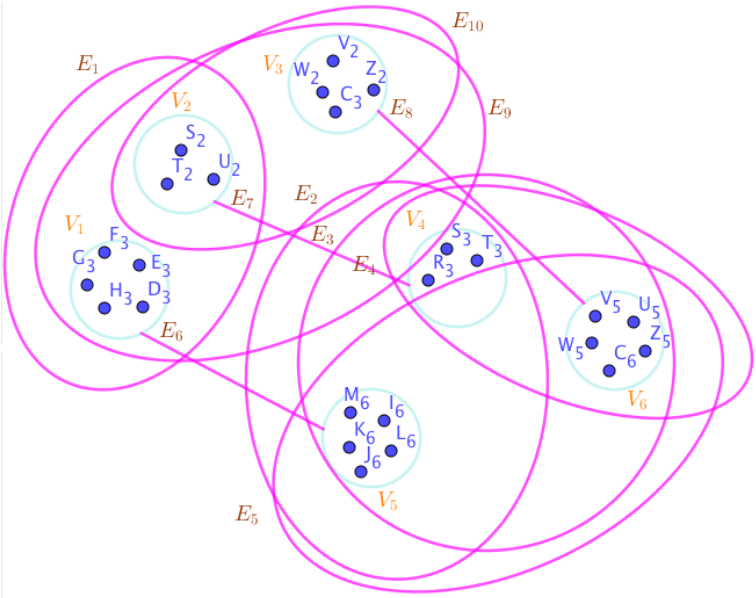

Figure 13. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

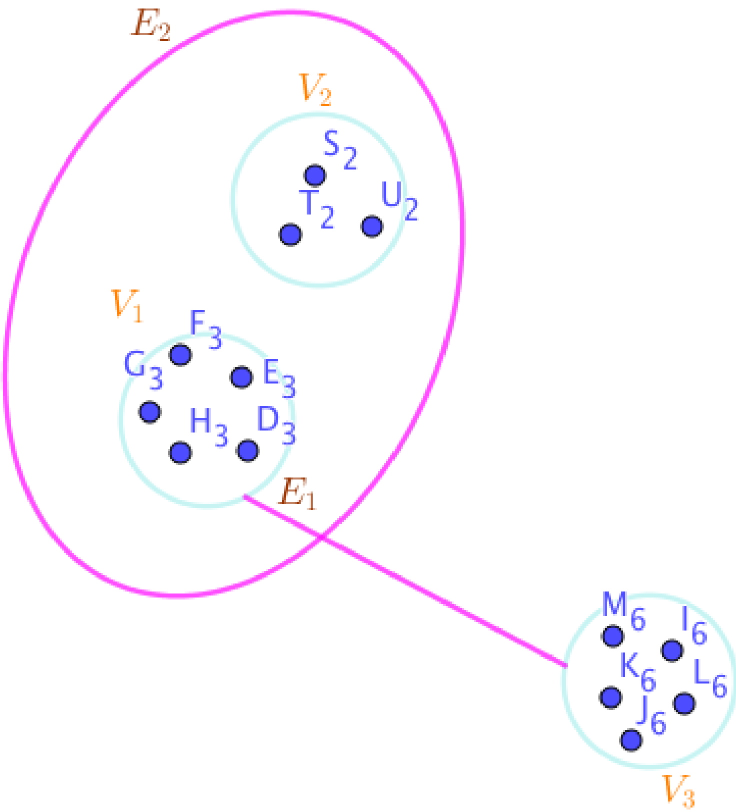

Figure 14. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

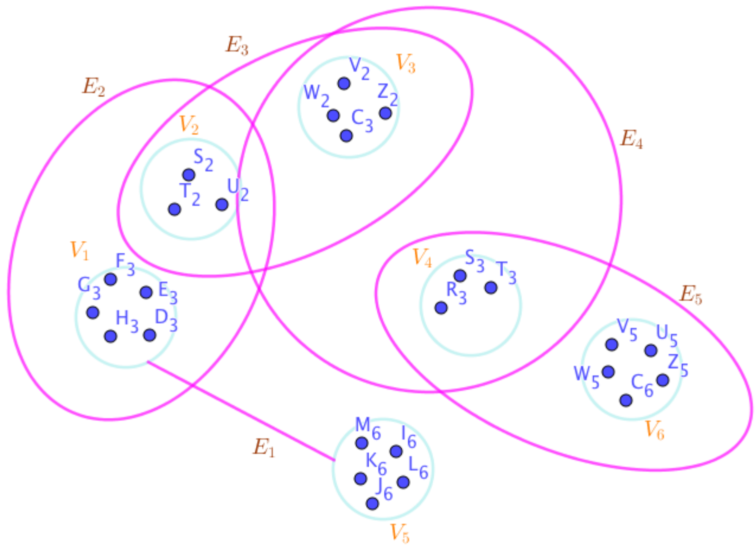

Figure 15. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

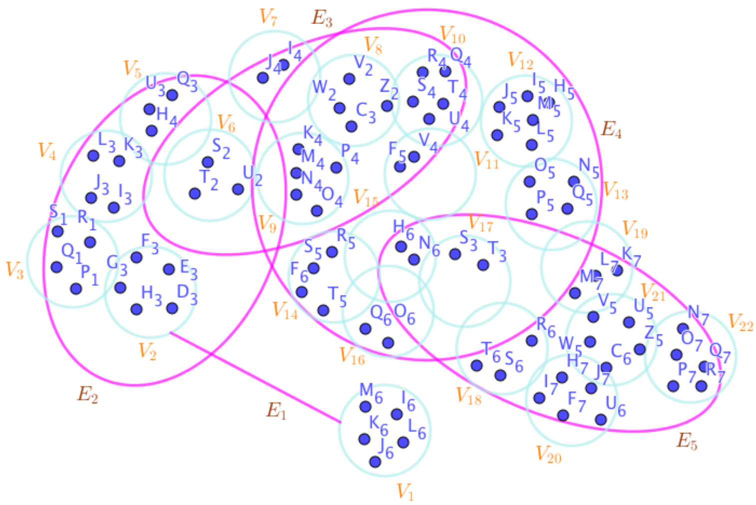

Figure 16. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

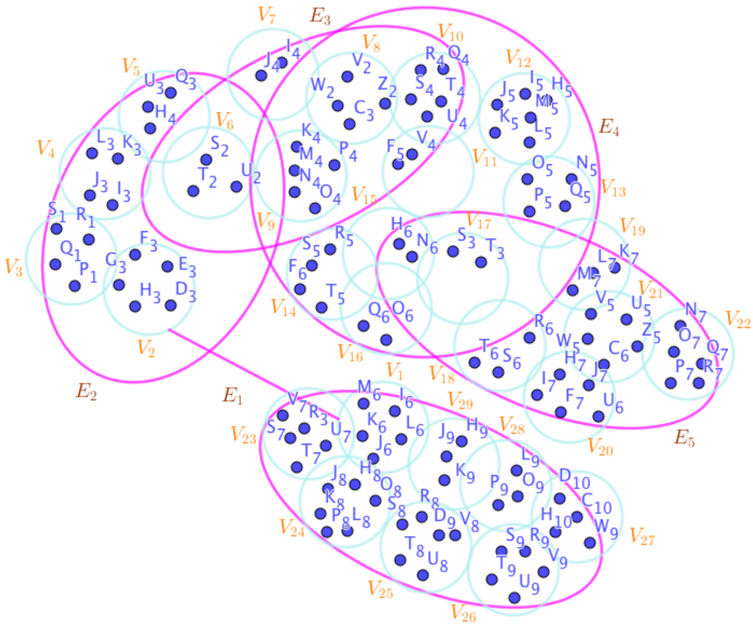

Figure 17. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

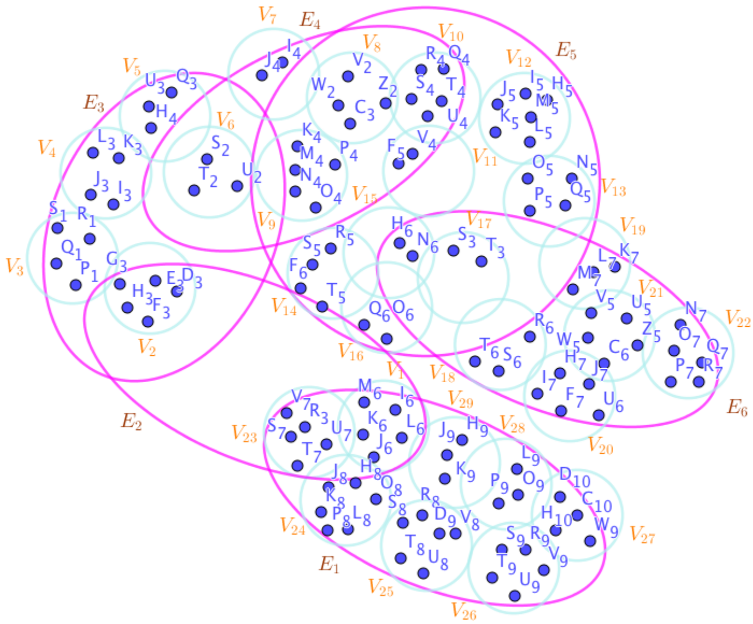

Figure 18. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

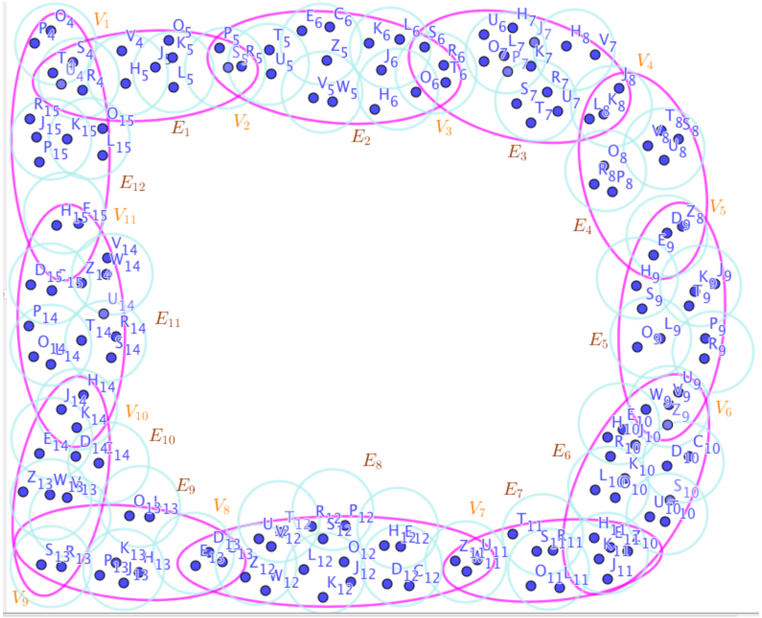

Figure 19. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

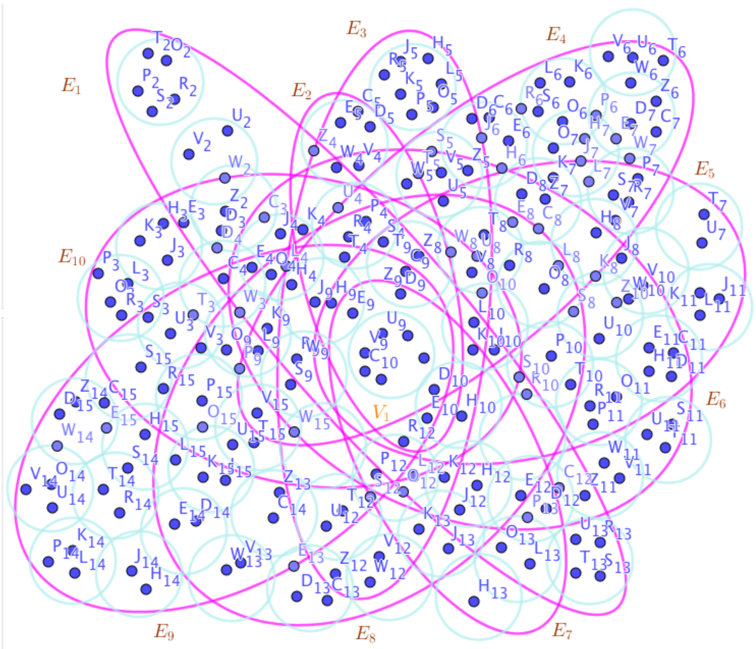

Figure 20. The SuperHyperGraphs Associated to the Notions of SuperHyperMatching in the Example (5)

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

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

is an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the extreme number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the extreme 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 extreme SuperHyperSet of the extreme SuperHyperVertices has the eligibilities to propose property such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices but the maximum extreme cardinality indicates that these extreme type-SuperHyperSets couldn't give us the extreme lower bound in the term of extreme sharpness. In other words, the extreme 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 extreme SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the extreme 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 extreme 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 extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme number of R-SuperHyperMatching has, the least cardinality, the lower sharp bound for cardinality, is the extreme 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 extreme structure of the extreme R-SuperHyperMatching decorates the extreme SuperHyperVertices don't have received any extreme connections so as this extreme style implies different versions of extreme SuperHyperEdges with the maximum extreme cardinality in the terms of extreme SuperHyperVertices are spotlight. The lower extreme bound is to have the maximum extreme groups of extreme SuperHyperVertices have perfect extreme connections inside each of SuperHyperEdges and the outside of this extreme SuperHyperSet doesn't matter but regarding the connectedness of the used extreme SuperHyperGraph arising from its extreme properties taken from the fact that it's simple. If there's no more than one extreme SuperHyperVertex in the targeted extreme SuperHyperSet, then there's no extreme connection. Furthermore, the extreme existence of one extreme SuperHyperVertex has no extreme effect to talk about the extreme R-SuperHyperMatching. Since at least two extreme SuperHyperVertices involve to make a title in the extreme background of the extreme SuperHyperGraph. The extreme SuperHyperGraph is obvious if it has no extreme SuperHyperEdge but at least two extreme SuperHyperVertices make the extreme version of extreme SuperHyperEdge. Thus in the extreme setting of non-obvious extreme SuperHyperGraph, there are at least one extreme SuperHyperEdge. It's necessary to mention that the word "Simple" is used as extreme adjective for the initial extreme SuperHyperGraph, induces there's no extreme appearance of the loop extreme version of the extreme SuperHyperEdge and this extreme SuperHyperGraph is said to be loopless. The extreme adjective "loop" on the basic extreme framework engages one extreme SuperHyperVertex but it never happens in this extreme setting. With these extreme bases, on an extreme SuperHyperGraph, there's at least one extreme SuperHyperEdge thus there's at least an extreme R-SuperHyperMatching has the extreme cardinality of an extreme SuperHyperEdge. Thus, an extreme R-SuperHyperMatching has the extreme cardinality at least an extreme SuperHyperEdge. Assume an extreme SuperHyperSet $V \setminus V \setminus \{z\}$. This extreme SuperHyperSet isn't an extreme R-SuperHyperMatching since either the extreme SuperHyperGraph is an obvious extreme SuperHyperModel thus it never happens since there's no extreme usage of this extreme framework and even more there's no extreme connection inside or the extreme SuperHyperGraph isn't obvious and as its consequences, there's an extreme contradiction with the term "extreme R-SuperHyperMatching" since the maximum extreme cardinality never happens for this extreme style of the extreme SuperHyperSet and beyond that there's no extreme connection inside as mentioned in first extreme case in the forms of drawback for this selected extreme 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 extreme case implies having the extreme style of on-quasi-triangle extreme style on the every extreme elements of this extreme SuperHyperSet. Precisely, the extreme R-SuperHyperMatching is the extreme SuperHyperSet of the extreme SuperHyperVertices such that some extreme amount of the extreme SuperHyperVertices are on-quasi-triangle extreme style. The extreme 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 extreme 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 extreme bound is up. Thus the minimum extreme cardinality of the maximum extreme cardinality ends up the extreme discussion. The first extreme term refers to the extreme setting of the extreme SuperHyperGraph but this key point is enough since there's an extreme SuperHyperClass of an extreme SuperHyperGraph has no on-quasi-triangle extreme style amid some amount of its extreme SuperHyperVertices. This extreme setting of the extreme SuperHyperModel proposes an extreme SuperHyperSet has only some amount extreme SuperHyperVertices from one extreme SuperHyperEdge such that there's no extreme amount of extreme SuperHyperEdges more than one involving these some amount of these extreme SuperHyperVertices. The extreme cardinality of this extreme SuperHyperSet is the maximum and the extreme case is occurred in the minimum extreme situation. To sum them up, the extreme 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 extreme 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 extreme SuperHyperVertices such that there's distinct-covers-order-amount extreme SuperHyperEdges for amount of extreme SuperHyperVertices taken from the extreme 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 extreme SuperHyperSet of the extreme 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 extreme R-SuperHyperMatching for the extreme SuperHyperGraph as used extreme background in the extreme terms of worst extreme case and the common theme of the lower extreme bound occurred in the specific extreme SuperHyperClasses of the extreme SuperHyperGraphs which are extreme free-quasi-triangle.

To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme

SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme SuperHyperGraph $ESHG:(V,E)$.
To sum them up, assume a simple neutrosophic SuperHyperGraph $ESHG:(V,E)$. Then the extreme number of R-SuperHyperMatching has, the least cardinality, the lower sharp bound for cardinality, is the extreme 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 extreme SuperHyperGraph $ESHG:(V,E)$. If an extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z extreme SuperHyperVertices, then the extreme cardinality of the extreme R-SuperHyperMatching is at least*

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

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

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

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

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

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

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

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

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 extreme R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the extreme SuperHyperVertices belong to the extreme 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,

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

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

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

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

It's straightforward that the extreme cardinality of the extreme R-SuperHyperMatching is at least the maximum extreme number of extreme SuperHyperVertices of the extreme SuperHyperEdges with the maximum number of the extreme SuperHyperEdges. In other words, the maximum number of the extreme SuperHyperEdges contains the maximum extreme number of extreme SuperHyperVertices are renamed to extreme SuperHyperMatching in some cases but the maximum number of the extreme SuperHyperEdge with the maximum extreme number of extreme SuperHyperVertices, has the extreme SuperHyperVertices are contained in an extreme R-SuperHyperMatching.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up. The following extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. If an extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z extreme SuperHyperVertices, then the extreme cardinality of the extreme R-SuperHyperMatching is at least

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

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

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

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

more than outside. Thus the title "exterior" is more relevant than the title "interior". One extreme SuperHyperVertex has no connection, inside. Thus, the extreme SuperHyperSet of the extreme SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the extreme R-SuperHyperMatching. The extreme R-SuperHyperMatching with the exclusion of the exclusion of all extreme SuperHyperVertices in one extreme SuperHyperEdge and with other terms, the extreme R-SuperHyperMatching with the inclusion of all extreme SuperHyperVertices in one extreme SuperHyperEdge, is an extreme quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious extreme SuperHyperGraph $ESHG : (V, E)$. There's only one extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior extreme SuperHyperVertices inside of any given extreme quasi-R-SuperHyperMatching minus all extreme SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct extreme SuperHyperVertices in an extreme quasi-R-SuperHyperMatching, minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG:(V,E)$. There's only one extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior extreme SuperHyperVertices inside of any given extreme quasi-R-SuperHyperMatching minus all extreme SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct extreme SuperHyperVertices in an extreme quasi-R-SuperHyperMatching, minus all extreme SuperHypeNeighbor to some of them but not all of them. □

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

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

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

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

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

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

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

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

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

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

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

And then,

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

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

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

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

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

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

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

number, an extreme SuperHyperNeighborhood and an extreme SuperHyperMatching and the new terms are up.

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

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

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

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

And with go back to initial structure,

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

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

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

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

Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all

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only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme SuperHypeNeighbors to any amount of them. □

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

Proof. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. Let an extreme SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some extreme SuperHyperVertices r. Consider all extreme numbers of those extreme SuperHyperVertices from that extreme SuperHyperEdge excluding excluding more than r distinct extreme SuperHyperVertices, exclude to any given extreme SuperHyperSet of the extreme SuperHyperVertices. Consider there's an extreme R-SuperHyperMatching with the least cardinality, the lower sharp extreme bound for extreme cardinality. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is an extreme SuperHyperSet S of the extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely but it isn't an extreme R-SuperHyperMatching. Since it doesn't have **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some SuperHyperVertices uniquely. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum extreme cardinality of an extreme SuperHyperSet S of extreme SuperHyperVertices but it isn't an extreme R-SuperHyperMatching. Since it **doesn't do** the extreme procedure such that such that there's an extreme SuperHyperEdge to have extreme SuperHyperVertices uniquely [there are at least one extreme SuperHyperVertex outside implying there's, sometimes in the connected extreme SuperHyperGraph $ESHG : (V, E)$, an extreme SuperHyperVertex, titled its extreme SuperHyperNeighbor, to that extreme SuperHyperVertex in the extreme SuperHyperSet S so as S doesn't do "the extreme procedure".]. There's only **one** extreme SuperHyperVertex **outside** the intended extreme SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of extreme

SuperHyperNeighborhood. Thus the obvious extreme R-SuperHyperMatching, V_{ESHE} is up. The obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching, V_{ESHE}, **is** an extreme SuperHyperSet, V_{ESHE}, **includes** only **all** extreme SuperHyperVertices does forms any kind of extreme pairs are titled extreme SuperHyperNeighbors in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Since the extreme SuperHyperSet of the extreme SuperHyperVertices V_{ESHE}, is the **maximum extreme SuperHyperCardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices **such that** there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely. Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Any extreme R-SuperHyperMatching only contains all interior extreme SuperHyperVertices and all exterior extreme SuperHyperVertices from the unique extreme SuperHyperEdge where there's any of them has all possible extreme SuperHyperNeighbors in and there's all extreme SuperHyperNeighborhoods in with no exception minus all extreme SuperHypeNeighbors to some of them not all of them but everything is possible about extreme SuperHyperNeighborhoods and extreme SuperHyperNeighbors out.
To make sense with the precise words in the terms of "R-', the follow-up illustrations are coming up.
The following extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. Any extreme R-SuperHyperMatching only contains all interior extreme SuperHyperVertices and all exterior extreme SuperHyperVertices from the unique extreme SuperHyperEdge where there's any of them has all possible extreme SuperHyperNeighbors in and there's all extreme SuperHyperNeighborhoods in with no exception minus all extreme SuperHypeNeighbors to some of them not all of them but everything is possible about extreme SuperHyperNeighborhoods and extreme SuperHyperNeighbors out. □

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

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

Proof. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. Consider an extreme SuperHyperDominating. By applying the Proposition (11), the extreme results are up. Thus on a connected extreme SuperHyperGraph $ESHG : (V, E)$. Consider an extreme SuperHyperDominating. Then an extreme SuperHyperMatching has the members poses only one extreme representative in an extreme quasi-SuperHyperDominating. □

5. Results on Extreme SuperHyperClasses

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

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

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

SuperHyperEdges. An extreme quasi-R-SuperHyperMatching has the extreme number of all the interior extreme SuperHyperVertices. Also,

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

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 extreme SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the extreme number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the extreme 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 extreme SuperHyperSet of the extreme SuperHyperVertices has the eligibilities to propose property such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices but the maximum extreme cardinality indicates that these extreme type-SuperHyperSets couldn't give us the extreme lower bound in the term of extreme sharpness. In other words, the extreme 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 extreme SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the extreme 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 extreme 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 extreme 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 extreme structure of the extreme R-SuperHyperMatching decorates the extreme SuperHyperVertices don't have received any extreme connections so as this extreme style implies different versions of extreme SuperHyperEdges with the maximum extreme cardinality in the terms of extreme SuperHyperVertices are spotlight. The lower extreme bound is to have the maximum extreme groups of extreme SuperHyperVertices have perfect extreme connections inside each of SuperHyperEdges and the outside of this extreme SuperHyperSet doesn't matter but regarding the connectedness of the used extreme SuperHyperGraph arising from its extreme properties taken from the fact that it's simple. If there's no more than one extreme SuperHyperVertex in the targeted extreme SuperHyperSet, then there's no extreme connection. Furthermore, the extreme existence of one extreme SuperHyperVertex has no extreme effect to talk about the extreme R-SuperHyperMatching. Since at least two extreme SuperHyperVertices involve to make a title in the extreme background of the extreme SuperHyperGraph. The extreme SuperHyperGraph is obvious if it has no extreme SuperHyperEdge but at least two extreme SuperHyperVertices make the extreme version of extreme SuperHyperEdge. Thus in the extreme setting of non-obvious extreme SuperHyperGraph, there are at least one extreme SuperHyperEdge. It's necessary to mention that the word "Simple" is used as extreme adjective for the initial extreme SuperHyperGraph, induces there's no extreme appearance of the loop extreme version of the extreme SuperHyperEdge and this extreme SuperHyperGraph is said to be loopless. The extreme adjective "loop" on the basic extreme framework engages one extreme SuperHyperVertex but it never happens in this extreme setting. With these extreme bases, on an extreme SuperHyperGraph, there's at least one extreme SuperHyperEdge thus there's at least an extreme R-SuperHyperMatching has the extreme cardinality of an extreme SuperHyperEdge. Thus, an extreme R-SuperHyperMatching has the extreme cardinality at least an extreme SuperHyperEdge. Assume an extreme SuperHyperSet $V \setminus V \setminus \{z\}$. This extreme SuperHyperSet isn't an extreme R-SuperHyperMatching since either the extreme SuperHyperGraph is an obvious extreme SuperHyperModel thus it never happens since there's no extreme usage of this extreme framework and even more there's no extreme connection inside or the extreme SuperHyperGraph isn't obvious and as its consequences, there's an extreme contradiction with the term "extreme R-SuperHyperMatching" since the maximum extreme cardinality never happens for this extreme style of the extreme SuperHyperSet and beyond that there's no extreme connection inside as mentioned in first extreme case in the forms of drawback for this selected extreme 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 extreme case implies having the extreme style of on-quasi-triangle extreme style on the every extreme elements of this extreme SuperHyperSet. Precisely, the extreme R-SuperHyperMatching is the extreme SuperHyperSet of the extreme SuperHyperVertices such that some extreme amount of the extreme SuperHyperVertices are on-quasi-triangle extreme style. The extreme 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 extreme 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 extreme bound is up. Thus the minimum extreme cardinality of the maximum extreme cardinality ends up the extreme discussion. The first extreme term refers to the extreme setting of the extreme SuperHyperGraph but this key point is enough since there's an extreme SuperHyperClass of an extreme SuperHyperGraph has no on-quasi-triangle extreme style amid some amount of its extreme SuperHyperVertices. This extreme setting of the extreme SuperHyperModel proposes an extreme SuperHyperSet has only some amount extreme SuperHyperVertices from one extreme SuperHyperEdge such that there's no extreme amount of extreme SuperHyperEdges more than one involving these some amount of these extreme SuperHyperVertices. The extreme cardinality of this extreme SuperHyperSet is the maximum and the extreme case is occurred in the minimum extreme situation. To sum them up, the extreme 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 extreme 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 extreme SuperHyperVertices such that there's distinct-covers-order-amount extreme SuperHyperEdges for amount of extreme SuperHyperVertices taken from the extreme 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 extreme SuperHyperSet of the extreme 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 extreme R-SuperHyperMatching for the extreme SuperHyperGraph as used extreme background in the extreme terms of worst extreme case and the common theme of the lower extreme bound occurred in the specific extreme SuperHyperClasses of the extreme SuperHyperGraphs which are extreme free-quasi-triangle.
Assume an extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z extreme number of the extreme SuperHyperVertices. Then every extreme SuperHyperVertex has at least no extreme SuperHyperEdge with others in common. Thus those extreme SuperHyperVertices have the eligibles to be contained in an extreme R-SuperHyperMatching. Those extreme SuperHyperVertices are potentially included in an extreme style-R-SuperHyperMatching. Formally, consider

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

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

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

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

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

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 extreme R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the extreme SuperHyperVertices belong to the extreme 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,

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

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

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

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

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

SuperHyperEdge with the maximum extreme number of extreme SuperHyperVertices, has the extreme SuperHyperVertices are contained in an extreme R-SuperHyperMatching.
The obvious SuperHyperGraph has no extreme SuperHyperEdges. But the non-obvious extreme SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the extreme optimal SuperHyperObject. It specially delivers some remarks on the extreme SuperHyperSet of the extreme SuperHyperVertices such that there's distinct amount of extreme SuperHyperEdges for distinct amount of extreme SuperHyperVertices up to all taken from that extreme SuperHyperSet of the extreme SuperHyperVertices but this extreme SuperHyperSet of the extreme SuperHyperVertices is either has the maximum extreme SuperHyperCardinality or it doesn't have maximum extreme SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one extreme SuperHyperEdge containing at least all extreme SuperHyperVertices. Thus it forms an extreme quasi-R-SuperHyperMatching where the extreme completion of the extreme incidence is up in that. Thus it's, literarily, an extreme 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 extreme SuperHyperCardinality and they're extreme SuperHyperOptimal. The less than two distinct types of extreme SuperHyperVertices are included in the minimum extreme style of the embedded extreme R-SuperHyperMatching. The interior types of the extreme SuperHyperVertices are deciders. Since the extreme number of SuperHyperNeighbors are only affected by the interior extreme SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the extreme SuperHyperSet for any distinct types of extreme SuperHyperVertices pose the extreme R-SuperHyperMatching. Thus extreme exterior SuperHyperVertices could be used only in one extreme SuperHyperEdge and in extreme SuperHyperRelation with the interior extreme SuperHyperVertices in that extreme SuperHyperEdge. In the embedded extreme SuperHyperMatching, there's the usage of exterior extreme SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One extreme SuperHyperVertex has no connection, inside. Thus, the extreme SuperHyperSet of the extreme SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the extreme R-SuperHyperMatching. The extreme R-SuperHyperMatching with the exclusion of the exclusion of all extreme SuperHyperVertices in one extreme SuperHyperEdge and with other terms, the extreme R-SuperHyperMatching with the inclusion of all extreme SuperHyperVertices in one extreme SuperHyperEdge, is an extreme quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious extreme SuperHyperGraph $ESHG : (V, E)$. There's only one extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior extreme SuperHyperVertices inside of any given extreme quasi-R-SuperHyperMatching minus all extreme SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct extreme SuperHyperVertices in an extreme quasi-R-SuperHyperMatching, minus all extreme SuperHypeNeighbor to some of them but not all of them.
The main definition of the extreme R-SuperHyperMatching has two titles. An extreme quasi-R-SuperHyperMatching and its corresponded quasi-maximum extreme R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any extreme number, there's an extreme quasi-R-SuperHyperMatching with that quasi-maximum extreme SuperHyperCardinality in the terms of the embedded extreme SuperHyperGraph. If there's an embedded extreme SuperHyperGraph, then the extreme quasi-SuperHyperNotions lead us to take the collection of all the extreme quasi-R-SuperHyperMatchings for all extreme numbers less than its extreme corresponded maximum number. The essence of the extreme SuperHyperMatching ends up but this essence starts up in the terms of the extreme quasi-R-SuperHyperMatching, again and more in the operations of collecting all the extreme quasi-R-SuperHyperMatchings acted on the all possible used

formations of the extreme SuperHyperGraph to achieve one extreme number. This extreme number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{Extreme Number}}$, $S_{\text{Extreme SuperHyperSet}}$ and $G_{\text{Extreme SuperHyperMatching}}$ be an extreme number, an extreme SuperHyperSet and an extreme SuperHyperMatching. Then

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

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

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

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

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

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

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

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

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

And then,

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

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

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

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

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

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

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

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

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

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

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

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And with go back to initial structure,

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

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

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

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

Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme SuperHypeNeighbors to any amount of them.
Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. Let an extreme SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some extreme SuperHyperVertices r. Consider all extreme numbers of those extreme SuperHyperVertices from that extreme SuperHyperEdge excluding excluding more than r distinct extreme SuperHyperVertices, exclude to any given extreme SuperHyperSet of the extreme SuperHyperVertices. Consider there's an extreme R-SuperHyperMatching with the least cardinality, the lower sharp extreme bound for extreme cardinality. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. The extreme SuperHyperSet of the extreme SuperHyperVertices

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

The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices],

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

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

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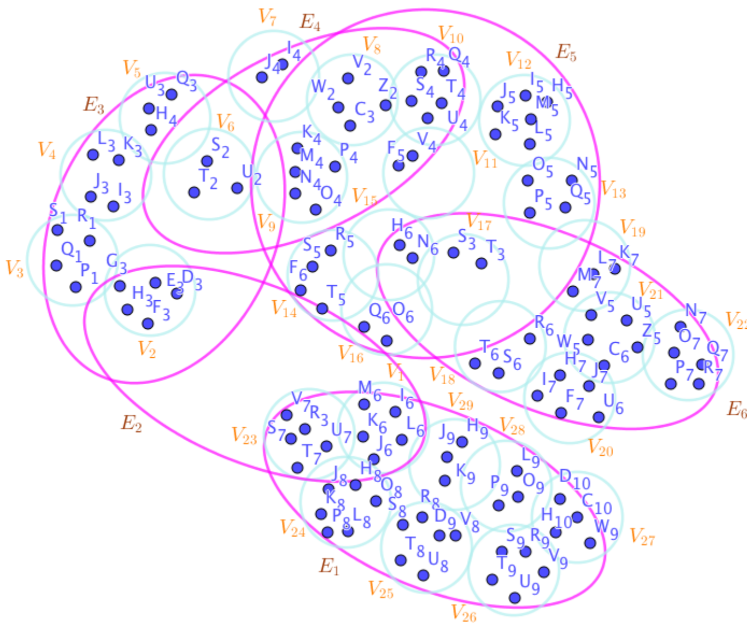

Figure 21. An extreme SuperHyperPath Associated to the Notions of extreme SuperHyperMatching in the Example (16)

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

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

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 extreme SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the extreme number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the extreme 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 extreme SuperHyperSet of the extreme SuperHyperVertices has the eligibilities to propose property such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices but the maximum extreme

cardinality indicates that these extreme type-SuperHyperSets couldn't give us the extreme lower bound in the term of extreme sharpness. In other words, the extreme 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 extreme SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the extreme 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 extreme 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 extreme 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 extreme structure of the extreme R-SuperHyperMatching decorates the extreme SuperHyperVertices don't have received any extreme connections so as this extreme style implies different versions of extreme SuperHyperEdges with the maximum extreme cardinality in the terms of extreme SuperHyperVertices are spotlight. The lower extreme bound is to have the maximum extreme groups of extreme SuperHyperVertices have perfect extreme connections inside each of SuperHyperEdges and the outside of this extreme SuperHyperSet doesn't matter but regarding the connectedness of the used extreme SuperHyperGraph arising from its extreme properties taken from the fact that it's simple. If there's no more than one extreme SuperHyperVertex in the targeted extreme SuperHyperSet, then there's no extreme connection. Furthermore, the extreme existence of one extreme SuperHyperVertex has no extreme effect to talk about the extreme R-SuperHyperMatching. Since at least two extreme SuperHyperVertices involve to make a title in the extreme background of the extreme SuperHyperGraph. The extreme SuperHyperGraph is

obvious if it has no extreme SuperHyperEdge but at least two extreme SuperHyperVertices make the extreme version of extreme SuperHyperEdge. Thus in the extreme setting of non-obvious extreme SuperHyperGraph, there are at least one extreme SuperHyperEdge. It's necessary to mention that the word "Simple" is used as extreme adjective for the initial extreme SuperHyperGraph, induces there's no extreme appearance of the loop extreme version of the extreme SuperHyperEdge and this extreme SuperHyperGraph is said to be loopless. The extreme adjective "loop" on the basic extreme framework engages one extreme SuperHyperVertex but it never happens in this extreme setting. With these extreme bases, on an extreme SuperHyperGraph, there's at least one extreme SuperHyperEdge thus there's at least an extreme R-SuperHyperMatching has the extreme cardinality of an extreme SuperHyperEdge. Thus, an extreme R-SuperHyperMatching has the extreme cardinality at least an extreme SuperHyperEdge. Assume an extreme SuperHyperSet $V \setminus V \setminus \{z\}$. This extreme SuperHyperSet isn't an extreme R-SuperHyperMatching since either the extreme SuperHyperGraph is an obvious extreme SuperHyperModel thus it never happens since there's no extreme usage of this extreme framework and even more there's no extreme connection inside or the extreme SuperHyperGraph isn't obvious and as its consequences, there's an extreme contradiction with the term "extreme R-SuperHyperMatching" since the maximum extreme cardinality never happens for this extreme style of the extreme SuperHyperSet and beyond that there's no extreme connection inside as mentioned in first extreme case in the forms of drawback for this selected extreme 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 extreme case implies having the extreme style of on-quasi-triangle extreme style on the every extreme elements of this extreme SuperHyperSet. Precisely, the extreme R-SuperHyperMatching is the extreme SuperHyperSet of the extreme SuperHyperVertices such that some extreme amount of the extreme SuperHyperVertices are on-quasi-triangle extreme style. The extreme 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 extreme 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 extreme bound is up. Thus the minimum extreme cardinality of the maximum extreme cardinality ends up the extreme discussion. The first extreme term refers to the extreme setting of the extreme SuperHyperGraph but this key point is enough since there's an extreme SuperHyperClass of an extreme SuperHyperGraph has no on-quasi-triangle extreme style amid some amount of its extreme SuperHyperVertices. This extreme setting of the extreme SuperHyperModel proposes an extreme SuperHyperSet has only some amount extreme SuperHyperVertices from one extreme SuperHyperEdge such that there's no extreme amount of extreme SuperHyperEdges more than one involving these some amount of these extreme SuperHyperVertices. The extreme cardinality of this extreme SuperHyperSet is the maximum and the extreme case is occurred in the minimum extreme situation. To sum them up, the extreme 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 extreme 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 extreme SuperHyperVertices such that there's distinct-covers-order-amount extreme SuperHyperEdges for amount of extreme SuperHyperVertices taken from the extreme 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 extreme SuperHyperSet of the extreme 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 extreme R-SuperHyperMatching for the extreme SuperHyperGraph as used extreme background in the extreme terms of worst extreme case and the common theme of the lower extreme bound occurred in the specific extreme SuperHyperClasses of the extreme SuperHyperGraphs which are extreme free-quasi-triangle.

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

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

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

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

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

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

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 extreme R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the extreme SuperHyperVertices belong to the extreme 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

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

But with the slightly differences,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

And then,

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

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

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

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

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

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

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

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

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

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

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

And with go back to initial structure,

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

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

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

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

Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme SuperHypeNeighbors to any amount of them.
Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. Let an extreme SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some extreme SuperHyperVertices r. Consider all extreme numbers of those extreme SuperHyperVertices from that extreme SuperHyperEdge excluding excluding more than r distinct extreme SuperHyperVertices, exclude to any given extreme SuperHyperSet of the extreme SuperHyperVertices. Consider there's an extreme R-SuperHyperMatching with the least cardinality, the lower sharp extreme bound for extreme cardinality. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is an extreme SuperHyperSet S of the extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely but it isn't an extreme R-SuperHyperMatching. Since it doesn't have **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some SuperHyperVertices uniquely. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum extreme cardinality of an extreme SuperHyperSet S of extreme SuperHyperVertices but it isn't an extreme R-SuperHyperMatching. Since it **doesn't do** the extreme procedure such that such that there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely [there are at least one extreme SuperHyperVertex outside implying there's, sometimes in the connected extreme SuperHyperGraph $ESHG : (V, E)$, an extreme SuperHyperVertex, titled its extreme SuperHyperNeighbor, to that extreme SuperHyperVertex in the extreme SuperHyperSet S so as S doesn't do "the extreme procedure".]. There's only **one** extreme SuperHyperVertex **outside** the intended extreme SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of extreme SuperHyperNeighborhood. Thus the obvious extreme R-SuperHyperMatching, V_{ESHE} is up. The obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching, V_{ESHE}, **is** an extreme SuperHyperSet, V_{ESHE}, **includes** only **all** extreme SuperHyperVertices does forms any kind of extreme pairs are titled extreme SuperHyperNeighbors in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Since the extreme SuperHyperSet of the extreme SuperHyperVertices V_{ESHE}, is the **maximum extreme SuperHyperCardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices **such that** there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely. Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Any extreme R-SuperHyperMatching only contains all interior extreme SuperHyperVertices and all exterior extreme SuperHyperVertices from the unique extreme SuperHyperEdge where there's any of them has all possible extreme SuperHyperNeighbors in and there's all extreme SuperHyperNeighborhoods in with no exception minus all extreme SuperHypeNeighbors to some of them not all of them but everything is possible about extreme SuperHyperNeighborhoods and extreme SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet

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

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

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

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

Example 18. In the Figure (22), the connected extreme SuperHyperCycle $NSHC : (V, E)$, is highlighted and featured. The obtained extreme SuperHyperSet, in the extreme SuperHyperModel (22), is the extreme SuperHyperMatching.

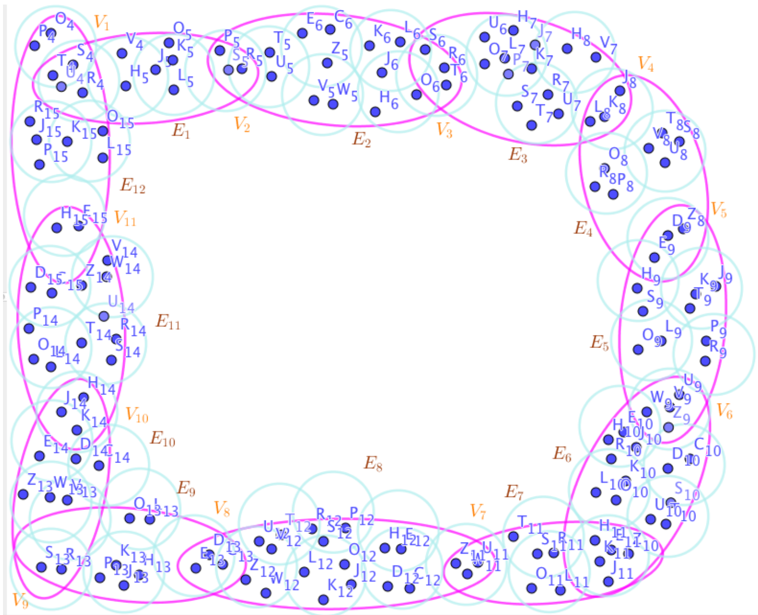

Figure 22. An extreme SuperHyperCycle Associated to the extreme Notions of extreme SuperHyperMatching in the extreme Example (18)

Proposition 19. *Assume a connected extreme SuperHyperStar $ESHS : (V, E)$. Then an extreme quasi-R-SuperHyperMatching is an extreme SuperHyperSet of the interior extreme SuperHyperVertices, corresponded to an extreme SuperHyperEdge. An extreme quasi-R-SuperHyperMatching has the extreme number of the extreme cardinality of the one extreme SuperHyperEdge. Also,*

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E \in E_{ESHG:(V,E)}\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= \sum_{|E_{ESHG:(V,E)}|_{Extreme\ Cardinality}} z^{|E|_{Extreme\ Cardinality}\ |\ E:\in E_{ESHG:(V,E)}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.$$

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 extreme SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the extreme number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the extreme 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 extreme SuperHyperSet of the extreme SuperHyperVertices has the eligibilities to propose property such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices but the maximum extreme cardinality indicates that these extreme type-SuperHyperSets couldn't give us the extreme lower bound in the term of extreme sharpness. In other words, the extreme 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 extreme SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the extreme 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 extreme 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 extreme 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 extreme structure of the extreme R-SuperHyperMatching decorates the extreme

SuperHyperVertices don't have received any extreme connections so as this extreme style implies different versions of extreme SuperHyperEdges with the maximum extreme cardinality in the terms of extreme SuperHyperVertices are spotlight. The lower extreme bound is to have the maximum extreme groups of extreme SuperHyperVertices have perfect extreme connections inside each of SuperHyperEdges and the outside of this extreme SuperHyperSet doesn't matter but regarding the connectedness of the used extreme SuperHyperGraph arising from its extreme properties taken from the fact that it's simple. If there's no more than one extreme SuperHyperVertex in the targeted extreme SuperHyperSet, then there's no extreme connection. Furthermore, the extreme existence of one extreme SuperHyperVertex has no extreme effect to talk about the extreme R-SuperHyperMatching. Since at least two extreme SuperHyperVertices involve to make a title in the extreme background of the extreme SuperHyperGraph. The extreme SuperHyperGraph is obvious if it has no extreme SuperHyperEdge but at least two extreme SuperHyperVertices make the extreme version of extreme SuperHyperEdge. Thus in the extreme setting of non-obvious extreme SuperHyperGraph, there are at least one extreme SuperHyperEdge. It's necessary to mention that the word "Simple" is used as extreme adjective for the initial extreme SuperHyperGraph, induces there's no extreme appearance of the loop extreme version of the extreme SuperHyperEdge and this extreme SuperHyperGraph is said to be loopless. The extreme adjective "loop" on the basic extreme framework engages one extreme SuperHyperVertex but it never happens in this extreme setting. With these extreme bases, on an extreme SuperHyperGraph, there's at least one extreme SuperHyperEdge thus there's at least an extreme R-SuperHyperMatching has the extreme cardinality of an extreme SuperHyperEdge. Thus, an extreme R-SuperHyperMatching has the extreme cardinality at least an extreme SuperHyperEdge. Assume an extreme SuperHyperSet $V \setminus V \setminus \{z\}$. This extreme SuperHyperSet isn't an extreme R-SuperHyperMatching since either the extreme SuperHyperGraph is an obvious extreme SuperHyperModel thus it never happens since there's no extreme usage of this extreme framework and even more there's no extreme connection inside or the extreme SuperHyperGraph isn't obvious and as its consequences, there's an extreme contradiction with the term "extreme R-SuperHyperMatching" since the maximum extreme cardinality never happens for this extreme style of the extreme SuperHyperSet and beyond that there's no extreme connection inside as mentioned in first extreme case in the forms of drawback for this selected extreme 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 extreme case implies having the extreme style of on-quasi-triangle extreme style on the every extreme elements of this extreme SuperHyperSet. Precisely, the extreme R-SuperHyperMatching is the extreme SuperHyperSet of the extreme SuperHyperVertices such that some extreme amount of the extreme SuperHyperVertices are on-quasi-triangle extreme style. The extreme 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 extreme 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 extreme bound is up. Thus the minimum extreme cardinality of the maximum extreme cardinality ends up the extreme discussion. The first extreme term refers to the extreme setting of the extreme SuperHyperGraph but this key point is enough since there's an extreme SuperHyperClass of an extreme SuperHyperGraph has no on-quasi-triangle extreme style amid some amount of its extreme SuperHyperVertices. This extreme setting of the extreme SuperHyperModel proposes an extreme SuperHyperSet has only some amount extreme SuperHyperVertices from one extreme SuperHyperEdge such that there's no extreme amount of extreme SuperHyperEdges more than one involving these some amount of these extreme SuperHyperVertices. The extreme cardinality of this extreme SuperHyperSet is the maximum and the extreme case is occurred in the minimum extreme situation. To sum them up, the extreme 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 extreme 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 extreme SuperHyperVertices such that there's distinct-covers-order-amount extreme SuperHyperEdges for amount of extreme SuperHyperVertices taken from the extreme 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 extreme SuperHyperSet of the extreme 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 extreme R-SuperHyperMatching for the extreme SuperHyperGraph as used extreme background in the extreme terms of worst extreme case and the common theme of the lower extreme bound occurred in the specific extreme SuperHyperClasses of the extreme SuperHyperGraphs which are extreme free-quasi-triangle.
Assume an extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z extreme number of the extreme SuperHyperVertices. Then every extreme SuperHyperVertex has at least no extreme SuperHyperEdge with others in common. Thus those extreme SuperHyperVertices have the eligibles to be contained in an extreme R-SuperHyperMatching. Those extreme SuperHyperVertices are potentially included in an extreme style-R-SuperHyperMatching. Formally, consider

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

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

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

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

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

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 extreme R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the extreme SuperHyperVertices belong to the extreme 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,

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

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

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

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

It's straightforward that the extreme cardinality of the extreme R-SuperHyperMatching is at least the maximum extreme number of extreme SuperHyperVertices of the extreme SuperHyperEdges with the maximum number of the extreme SuperHyperEdges. In other words, the maximum number of the extreme SuperHyperEdges contains the maximum extreme number of extreme SuperHyperVertices are renamed to extreme SuperHyperMatching in some cases but the maximum number of the extreme SuperHyperEdge with the maximum extreme number of extreme SuperHyperVertices, has the extreme SuperHyperVertices are contained in an extreme R-SuperHyperMatching.
The obvious SuperHyperGraph has no extreme SuperHyperEdges. But the non-obvious extreme SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the extreme optimal SuperHyperObject. It specially delivers some remarks on the extreme SuperHyperSet of the extreme SuperHyperVertices such that there's distinct amount of extreme SuperHyperEdges for distinct amount of extreme SuperHyperVertices up to all taken from that extreme SuperHyperSet of the extreme SuperHyperVertices but this extreme SuperHyperSet of the extreme SuperHyperVertices is either has the maximum extreme SuperHyperCardinality or it doesn't have maximum extreme SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one extreme SuperHyperEdge containing at least all extreme SuperHyperVertices. Thus it forms an extreme quasi-R-SuperHyperMatching where the extreme completion of the extreme incidence is up in that. Thus it's, literarily, an extreme 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 extreme

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

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

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

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

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

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

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

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

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

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

And then,

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

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

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

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

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

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

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

number, an extreme SuperHyperNeighborhood and an extreme SuperHyperMatching and the new terms are up.

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

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

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

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

And with go back to initial structure,

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

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

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

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

Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

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

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extreme SuperHyperVertices from the unique extreme SuperHyperEdge where there's any of them has all possible extreme SuperHyperNeighbors in and there's all extreme SuperHyperNeighborhoods in with no exception minus all extreme SuperHypeNeighbors to some of them not all of them but everything is possible about extreme SuperHyperNeighborhoods and extreme SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E \in E_{ESHG:(V,E)}\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= \sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}} \mid E:\in E_{ESHG:(V,E)}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E \in E_{ESHG:(V,E)}\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= \sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}} \mid E:\in E_{ESHG:(V,E)}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E \in E_{ESHG:(V,E)}\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= \sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}} \mid E:\in E_{ESHG:(V,E)}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E \in E_{ESHG:(V,E)}\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= \sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}}} \mid E : \in E_{ESHG:(V,E)}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots .$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots .$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E \in E_{ESHG:(V,E)}\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= \sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}}} \mid E : \in E_{ESHG:(V,E)}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots .$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots .$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E \in E_{ESHG:(V,E)}\}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= \sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}}} \mid E : \in E_{ESHG:(V,E)}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots .$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots .$$

Thus the non-obvious extreme SuperHyperMatching,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}} \mid E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t},\ldots.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=z^{s}+z^{t}+,\ldots.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}} \mid E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t},\ldots.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=z^{s}+z^{t}+,\ldots.
\end{aligned}$$

Is the extreme SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}} \mid E:\in E_{ESHG:(V,E)}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s},\{V_j\}_{j=1}^{t},\ldots.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=z^{s}+z^{t}+,\ldots.
\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E \in E_{ESHG:(V,E)}\}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=\sum_{|E_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}} z^{|E|_{\text{Extreme Cardinality}}} \mid E:\in E_{ESHG:(V,E)}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}, \{V_j\}_{j=1}^{t}, \ldots.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = z^s + z^t +, \ldots.
\end{aligned}$$

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

Example 20. In the Figure (23), the connected extreme SuperHyperStar $ESHS : (V, E)$, is highlighted and featured. The obtained extreme SuperHyperSet, by the Algorithm in previous extreme result, of the extreme SuperHyperVertices of the connected extreme SuperHyperStar $ESHS : (V, E)$, in the extreme SuperHyperModel (23), is the extreme SuperHyperMatching.

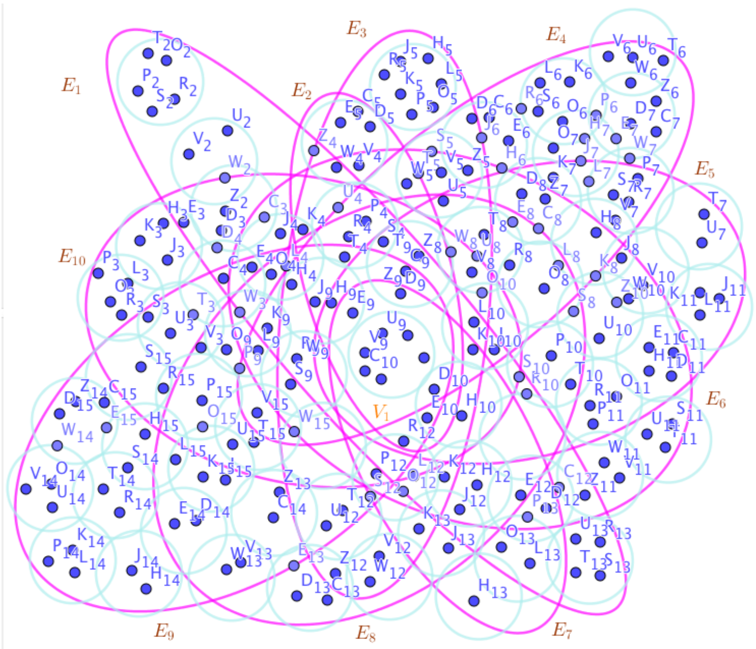

Figure 23. An extreme SuperHyperStar Associated to the extreme Notions of extreme SuperHyperMatching in the extreme Example (20)

Proposition 21. *Assume a connected extreme SuperHyperBipartite $ESHB : (V, E)$. Then an extreme R-SuperHyperMatching is an extreme SuperHyperSet of the interior extreme SuperHyperVertices with no extreme exceptions in the form of interior extreme SuperHyperVertices titled extreme SuperHyperNeighbors. An extreme R-SuperHyperMatching has the extreme maximum number of on extreme cardinality of the* *minimum SuperHyperPart minus those have common extreme SuperHyperNeighbors and not unique extreme SuperHyperNeighbors. Also,*

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{Extreme\ Cardinality}}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{Extreme\ Cardinality}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

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 extreme SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the extreme number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the extreme 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 extreme SuperHyperSet of the extreme SuperHyperVertices has the eligibilities to propose property such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices but the maximum extreme cardinality indicates that these extreme type-SuperHyperSets couldn't give us the extreme lower bound in the term of extreme sharpness. In other words, the extreme 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 extreme SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the extreme 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 extreme 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 extreme 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 extreme structure of the extreme R-SuperHyperMatching decorates the extreme SuperHyperVertices don't have received any extreme connections so as this extreme style implies different versions of extreme SuperHyperEdges with the maximum extreme cardinality in the terms of extreme SuperHyperVertices are spotlight. The lower extreme bound is to have the maximum extreme groups of extreme SuperHyperVertices have perfect extreme connections inside each of SuperHyperEdges and the outside of this extreme SuperHyperSet doesn't matter but regarding the connectedness of the used extreme SuperHyperGraph arising from its extreme properties taken from the fact that it's simple. If there's no more than one extreme SuperHyperVertex in the targeted extreme SuperHyperSet, then there's no extreme connection. Furthermore, the extreme existence of one extreme SuperHyperVertex has no extreme effect to talk about the extreme R-SuperHyperMatching. Since at least two extreme SuperHyperVertices involve to make a title in the extreme background of the extreme SuperHyperGraph. The extreme SuperHyperGraph is obvious if it has no extreme SuperHyperEdge but at least two extreme SuperHyperVertices make the extreme version of extreme SuperHyperEdge. Thus in the extreme setting of non-obvious extreme SuperHyperGraph, there are at least one extreme SuperHyperEdge. It's necessary to mention that the word "Simple" is used as extreme adjective for the initial extreme SuperHyperGraph, induces there's no extreme appearance of the loop extreme version of the extreme SuperHyperEdge and this extreme SuperHyperGraph is said to be loopless. The extreme adjective "loop" on the basic extreme framework engages one extreme SuperHyperVertex but it never happens in this extreme setting. With these extreme bases, on an extreme SuperHyperGraph, there's at least one extreme SuperHyperEdge thus there's at least an extreme R-SuperHyperMatching has the extreme cardinality of an extreme SuperHyperEdge. Thus, an extreme R-SuperHyperMatching has the extreme cardinality at least an extreme SuperHyperEdge. Assume an extreme SuperHyperSet $V \setminus V \setminus \{z\}$. This extreme SuperHyperSet isn't an extreme R-SuperHyperMatching since either the extreme SuperHyperGraph is an obvious extreme SuperHyperModel thus it never happens since there's no extreme usage of this extreme framework and even more there's no extreme connection inside or the extreme SuperHyperGraph isn't obvious and as its consequences, there's an extreme contradiction with the term "extreme R-SuperHyperMatching" since the maximum extreme cardinality never happens for this extreme style of the extreme SuperHyperSet and beyond that there's no extreme connection inside as mentioned in first extreme case in the forms of drawback for this selected extreme 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 extreme case implies having the extreme style of on-quasi-triangle extreme style on the every extreme elements of this extreme SuperHyperSet. Precisely, the extreme R-SuperHyperMatching is the extreme SuperHyperSet of the extreme SuperHyperVertices such that some extreme amount of the extreme SuperHyperVertices are on-quasi-triangle extreme style. The extreme 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 extreme 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 extreme bound is up. Thus the minimum extreme cardinality of the maximum extreme cardinality ends up the extreme discussion. The first extreme term refers to the extreme setting of the extreme SuperHyperGraph but this key point is enough since there's an extreme SuperHyperClass of an extreme SuperHyperGraph has no on-quasi-triangle extreme style amid some amount of its extreme SuperHyperVertices. This extreme setting of the extreme SuperHyperModel proposes an extreme SuperHyperSet has only some amount extreme SuperHyperVertices from one extreme SuperHyperEdge such that there's no extreme amount of extreme SuperHyperEdges more than one involving these some amount of these extreme SuperHyperVertices. The extreme cardinality of this extreme SuperHyperSet is the maximum and the extreme case is occurred in the minimum extreme situation. To sum them up, the extreme 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 extreme 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 extreme SuperHyperVertices such that there's distinct-covers-order-amount extreme SuperHyperEdges for amount of extreme SuperHyperVertices taken from the extreme 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 extreme SuperHyperSet of the extreme 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 extreme R-SuperHyperMatching for the extreme SuperHyperGraph as used extreme background in the extreme terms of worst extreme case and the common theme of the lower extreme bound occurred in the specific extreme SuperHyperClasses of the extreme SuperHyperGraphs which are extreme free-quasi-triangle.

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

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

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

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

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

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

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 extreme R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the extreme SuperHyperVertices belong to the extreme 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,

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

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

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

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

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

SuperHyperEdge with the maximum extreme number of extreme SuperHyperVertices, has the extreme SuperHyperVertices are contained in an extreme R-SuperHyperMatching.
The obvious SuperHyperGraph has no extreme SuperHyperEdges. But the non-obvious extreme SuperHyperModel is up. The quasi-SuperHyperModel addresses some issues about the extreme optimal SuperHyperObject. It specially delivers some remarks on the extreme SuperHyperSet of the extreme SuperHyperVertices such that there's distinct amount of extreme SuperHyperEdges for distinct amount of extreme SuperHyperVertices up to all taken from that extreme SuperHyperSet of the extreme SuperHyperVertices but this extreme SuperHyperSet of the extreme SuperHyperVertices is either has the maximum extreme SuperHyperCardinality or it doesn't have maximum extreme SuperHyperCardinality. In a non-obvious SuperHyperModel, there's at least one extreme SuperHyperEdge containing at least all extreme SuperHyperVertices. Thus it forms an extreme quasi-R-SuperHyperMatching where the extreme completion of the extreme incidence is up in that. Thus it's, literarily, an extreme 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 extreme SuperHyperCardinality and they're extreme SuperHyperOptimal. The less than two distinct types of extreme SuperHyperVertices are included in the minimum extreme style of the embedded extreme R-SuperHyperMatching. The interior types of the extreme SuperHyperVertices are deciders. Since the extreme number of SuperHyperNeighbors are only affected by the interior extreme SuperHyperVertices. The common connections, more precise and more formal, the perfect unique connections inside the extreme SuperHyperSet for any distinct types of extreme SuperHyperVertices pose the extreme R-SuperHyperMatching. Thus extreme exterior SuperHyperVertices could be used only in one extreme SuperHyperEdge and in extreme SuperHyperRelation with the interior extreme SuperHyperVertices in that extreme SuperHyperEdge. In the embedded extreme SuperHyperMatching, there's the usage of exterior extreme SuperHyperVertices since they've more connections inside more than outside. Thus the title "exterior" is more relevant than the title "interior". One extreme SuperHyperVertex has no connection, inside. Thus, the extreme SuperHyperSet of the extreme SuperHyperVertices with one SuperHyperElement has been ignored in the exploring to lead on the optimal case implying the extreme R-SuperHyperMatching. The extreme R-SuperHyperMatching with the exclusion of the exclusion of all extreme SuperHyperVertices in one extreme SuperHyperEdge and with other terms, the extreme R-SuperHyperMatching with the inclusion of all extreme SuperHyperVertices in one extreme SuperHyperEdge, is an extreme quasi-R-SuperHyperMatching. To sum them up, in a connected non-obvious extreme SuperHyperGraph $ESHG : (V, E)$. There's only one extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only the maximum possibilities of the distinct interior extreme SuperHyperVertices inside of any given extreme quasi-R-SuperHyperMatching minus all extreme SuperHypeNeighbor to some of them but not all of them. In other words, there's only an unique extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has only two distinct extreme SuperHyperVertices in an extreme quasi-R-SuperHyperMatching, minus all extreme SuperHypeNeighbor to some of them but not all of them.
The main definition of the extreme R-SuperHyperMatching has two titles. An extreme quasi-R-SuperHyperMatching and its corresponded quasi-maximum extreme R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any extreme number, there's an extreme quasi-R-SuperHyperMatching with that quasi-maximum extreme SuperHyperCardinality in the terms of the embedded extreme SuperHyperGraph. If there's an embedded extreme SuperHyperGraph, then the extreme quasi-SuperHyperNotions lead us to take the collection of all the extreme quasi-R-SuperHyperMatchings for all extreme numbers less than its extreme corresponded maximum number. The essence of the extreme SuperHyperMatching ends up but this essence starts up in the terms of the extreme quasi-R-SuperHyperMatching, again and more in the operations of collecting all the extreme quasi-R-SuperHyperMatchings acted on the all possible used

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formations of the extreme SuperHyperGraph to achieve one extreme number. This extreme number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{Extreme Number}}$, $S_{\text{Extreme SuperHyperSet}}$ and $G_{\text{Extreme SuperHyperMatching}}$ be an extreme number, an extreme SuperHyperSet and an extreme SuperHyperMatching. Then

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

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

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

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

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

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

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

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

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

And then,

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

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

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

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

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

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

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

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

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

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

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

And with go back to initial structure,

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

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

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

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

Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

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

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is up. The non-obvious simple extreme type-SuperHyperSet of the extreme 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 extreme 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 extreme 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 extreme type-SuperHyperSets called the

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme SuperHypeNeighbors to any amount of them.
Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. Let an extreme SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some extreme SuperHyperVertices r. Consider all extreme numbers of those extreme SuperHyperVertices from that extreme SuperHyperEdge excluding excluding more than r distinct extreme SuperHyperVertices, exclude to any given extreme SuperHyperSet of the extreme SuperHyperVertices. Consider there's an extreme R-SuperHyperMatching with the least cardinality, the lower sharp extreme bound for extreme cardinality. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. The extreme SuperHyperSet of the extreme SuperHyperVertices

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

The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet of the extreme SuperHyperMatching. The extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices],

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Thus the non-obvious extreme SuperHyperMatching,

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Is the extreme SuperHyperSet, not:

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

Example 22. In the extreme Figure (24), the connected extreme SuperHyperBipartite $ESHB:(V,E)$, is extreme highlighted and extreme featured. The obtained extreme SuperHyperSet, by the extreme Algorithm in previous extreme result, of the extreme SuperHyperVertices of the connected extreme SuperHyperBipartite $ESHB:(V,E)$, in the extreme SuperHyperModel (24), is the extreme SuperHyperMatching.

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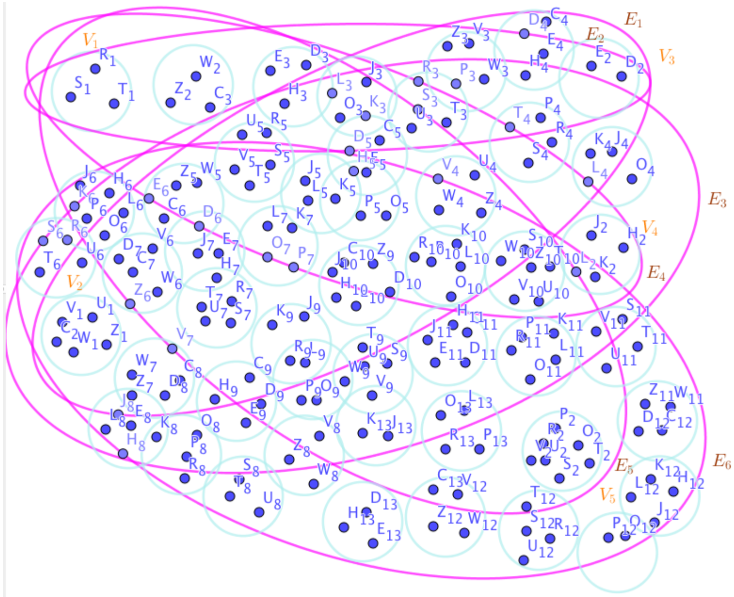

Figure 24. An extreme SuperHyperBipartite extreme Associated to the extreme Notions of extreme SuperHyperMatching in the Example (22)

Proposition 23. *Assume a connected extreme SuperHyperMultipartite $ESHM : (V, E)$. Then an extreme R-SuperHyperMatching is an extreme SuperHyperSet of the interior extreme SuperHyperVertices with only no extreme exception in the extreme form of interior extreme SuperHyperVertices from an extreme 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. An extreme R-SuperHyperMatching has the extreme maximum number on all the extreme summation on the extreme cardinality of the all extreme SuperHyperParts form some SuperHyperEdges minus those make extreme SuperHypeNeighbors to some not all or not unique. Also,*

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{Extreme\ Cardinality}}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{Extreme\ Cardinality}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

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 extreme SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the extreme number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the extreme 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 extreme SuperHyperSet of the extreme SuperHyperVertices has the eligibilities to propose property such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices but the maximum extreme

cardinality indicates that these extreme type-SuperHyperSets couldn't give us the extreme lower bound in the term of extreme sharpness. In other words, the extreme 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 extreme SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the extreme 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 extreme 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 extreme 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 extreme structure of the extreme R-SuperHyperMatching decorates the extreme SuperHyperVertices don't have received any extreme connections so as this extreme style implies different versions of extreme SuperHyperEdges with the maximum extreme cardinality in the terms of extreme SuperHyperVertices are spotlight. The lower extreme bound is to have the maximum extreme groups of extreme SuperHyperVertices have perfect extreme connections inside each of SuperHyperEdges and the outside of this extreme SuperHyperSet doesn't matter but regarding the connectedness of the used extreme SuperHyperGraph arising from its extreme properties taken from the fact that it's simple. If there's no more than one extreme SuperHyperVertex in the targeted extreme SuperHyperSet, then there's no extreme connection. Furthermore, the extreme existence of one extreme SuperHyperVertex has no extreme effect to talk about the extreme R-SuperHyperMatching. Since at least two extreme SuperHyperVertices involve to make a title in the extreme background of the extreme SuperHyperGraph. The extreme SuperHyperGraph is

obvious if it has no extreme SuperHyperEdge but at least two extreme SuperHyperVertices make the extreme version of extreme SuperHyperEdge. Thus in the extreme setting of non-obvious extreme SuperHyperGraph, there are at least one extreme SuperHyperEdge. It's necessary to mention that the word "Simple" is used as extreme adjective for the initial extreme SuperHyperGraph, induces there's no extreme appearance of the loop extreme version of the extreme SuperHyperEdge and this extreme SuperHyperGraph is said to be loopless. The extreme adjective "loop" on the basic extreme framework engages one extreme SuperHyperVertex but it never happens in this extreme setting. With these extreme bases, on an extreme SuperHyperGraph, there's at least one extreme SuperHyperEdge thus there's at least an extreme R-SuperHyperMatching has the extreme cardinality of an extreme SuperHyperEdge. Thus, an extreme R-SuperHyperMatching has the extreme cardinality at least an extreme SuperHyperEdge. Assume an extreme SuperHyperSet $V \setminus V \setminus \{z\}$. This extreme SuperHyperSet isn't an extreme R-SuperHyperMatching since either the extreme SuperHyperGraph is an obvious extreme SuperHyperModel thus it never happens since there's no extreme usage of this extreme framework and even more there's no extreme connection inside or the extreme SuperHyperGraph isn't obvious and as its consequences, there's an extreme contradiction with the term "extreme R-SuperHyperMatching" since the maximum extreme cardinality never happens for this extreme style of the extreme SuperHyperSet and beyond that there's no extreme connection inside as mentioned in first extreme case in the forms of drawback for this selected extreme 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 extreme case implies having the extreme style of on-quasi-triangle extreme style on the every extreme elements of this extreme SuperHyperSet. Precisely, the extreme R-SuperHyperMatching is the extreme SuperHyperSet of the extreme SuperHyperVertices such that some extreme amount of the extreme SuperHyperVertices are on-quasi-triangle extreme style. The extreme 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 extreme 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 extreme bound is up. Thus the minimum extreme cardinality of the maximum extreme cardinality ends up the extreme discussion. The first extreme term refers to the extreme setting of the extreme SuperHyperGraph but this key point is enough since there's an extreme SuperHyperClass of an extreme SuperHyperGraph has no on-quasi-triangle extreme style amid some amount of its extreme SuperHyperVertices. This extreme setting of the extreme SuperHyperModel proposes an extreme SuperHyperSet has only some amount extreme SuperHyperVertices from one extreme SuperHyperEdge such that there's no extreme amount of extreme SuperHyperEdges more than one involving these some amount of these extreme SuperHyperVertices. The extreme cardinality of this extreme SuperHyperSet is the maximum and the extreme case is occurred in the minimum extreme situation. To sum them up, the extreme 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 extreme 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 extreme SuperHyperVertices such that there's distinct-covers-order-amount extreme SuperHyperEdges for amount of extreme SuperHyperVertices taken from the extreme 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 extreme SuperHyperSet of the extreme 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 extreme R-SuperHyperMatching for the extreme SuperHyperGraph as used extreme background in the extreme terms of worst extreme case and the common theme of the lower extreme bound occurred in the specific extreme SuperHyperClasses of the extreme SuperHyperGraphs which are extreme free-quasi-triangle.
Assume an extreme SuperHyperEdge $E \in E_{ESHG:(V,E)}$ has z extreme number of the extreme SuperHyperVertices. Then every extreme SuperHyperVertex has at least no extreme SuperHyperEdge with others in common. Thus those extreme SuperHyperVertices have the eligibles to be contained in an extreme R-SuperHyperMatching. Those extreme SuperHyperVertices are potentially included in an extreme style-R-SuperHyperMatching. Formally, consider

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

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

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

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

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

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 extreme R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the extreme SuperHyperVertices belong to the extreme 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,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

And then,

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

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

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

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

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

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

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

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

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

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

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

And with go back to initial structure,

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

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

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

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

Thus, in a connected extreme SuperHyperGraph $ESHG : (V,E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V,E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme SuperHypeNeighbors to any amount of them.
Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. Let an extreme SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some extreme SuperHyperVertices r. Consider all extreme numbers of those extreme SuperHyperVertices from that extreme SuperHyperEdge excluding excluding more than r distinct extreme SuperHyperVertices, exclude to any given extreme SuperHyperSet of the extreme SuperHyperVertices. Consider there's an extreme R-SuperHyperMatching with the least cardinality, the lower sharp extreme bound for extreme cardinality. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is an extreme SuperHyperSet S of the extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely but it isn't an extreme R-SuperHyperMatching. Since it doesn't have **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some SuperHyperVertices uniquely. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum extreme cardinality of an extreme SuperHyperSet S of extreme SuperHyperVertices but it isn't an extreme R-SuperHyperMatching. Since it **doesn't do** the extreme procedure such that such that there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely [there are at least one extreme SuperHyperVertex outside implying there's, sometimes in the connected extreme SuperHyperGraph $ESHG : (V, E)$, an extreme SuperHyperVertex, titled its extreme SuperHyperNeighbor, to that extreme SuperHyperVertex in the extreme SuperHyperSet S so as S doesn't do "the extreme procedure".]. There's only **one** extreme SuperHyperVertex **outside** the intended extreme SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of extreme SuperHyperNeighborhood. Thus the obvious extreme R-SuperHyperMatching, V_{ESHE} is up. The obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching, V_{ESHE}, **is** an extreme SuperHyperSet, V_{ESHE}, **includes** only **all** extreme SuperHyperVertices does forms any kind of extreme pairs are titled extreme SuperHyperNeighbors in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Since the extreme SuperHyperSet of the extreme SuperHyperVertices V_{ESHE}, is the **maximum extreme SuperHyperCardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices **such that** there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely. Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Any extreme R-SuperHyperMatching only contains all interior extreme SuperHyperVertices and all exterior extreme SuperHyperVertices from the unique extreme SuperHyperEdge where there's any of them has all possible extreme SuperHyperNeighbors in and there's all extreme SuperHyperNeighborhoods in with no exception minus all extreme SuperHypeNeighbors to some of them not all of them but everything is possible about extreme SuperHyperNeighborhoods and extreme SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

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

$$\begin{aligned}
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}\\
&=\{E_{2i-1}\}_{i=1}^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}\\
&=z^{\min|P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching}=\{V_i\}_{i=1}^{s}.\\
&\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial}=az^{s}.
\end{aligned}$$

Thus the non-obvious extreme SuperHyperMatching,

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

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

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

Is the extreme SuperHyperSet, not:

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

is only and only

$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatching}$$
$$= \{E_{2i-1}\}_{i=1}^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeQuasi-SuperHyperMatchingSuperHyperPolynomial}$$
$$= z^{\min |P_{ESHG:(V,E)}|_{\text{Extreme Cardinality}}}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatching} = \{V_i\}_{i=1}^{s}.$$
$$\mathcal{C}(NSHG)_{ExtremeR-Quasi-SuperHyperMatchingSuperHyperPolynomial} = az^{s}.$$

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

Example 24. In the Figure (25), the connected extreme SuperHyperMultipartite $ESHM : (V, E)$, is highlighted and extreme featured. The obtained extreme SuperHyperSet, by the Algorithm in previous extreme result, of the extreme SuperHyperVertices of the connected extreme SuperHyperMultipartite $ESHM : (V, E)$, in the extreme SuperHyperModel (25), is the extreme SuperHyperMatching.

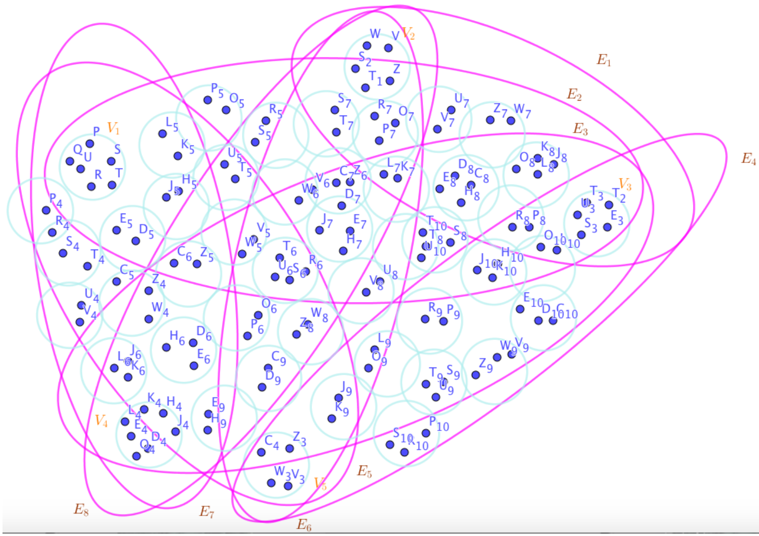

Figure 25. An extreme SuperHyperMultipartite Associated to the Notions of extreme SuperHyperMatching in the Example (24)

Proposition 25. *Assume a connected extreme SuperHyperWheel $ESHW : (V, E)$. Then an extreme R-SuperHyperMatching is an extreme SuperHyperSet of the interior extreme SuperHyperVertices, excluding the extreme SuperHyperCenter, with only no exception in the form of interior extreme SuperHyperVertices from same extreme SuperHyperEdge with the exclusion on extreme SuperHypeNeighbors to some of them and not all. An extreme R-SuperHyperMatching has the extreme maximum number on all the extreme number of all the extreme SuperHyperEdges don't have common extreme SuperHyperNeighbors. Also,*

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

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 extreme SuperHyperEdges nor amount of SuperHyperVertices where amount refers to the extreme number of SuperHyperVertices(-/SuperHyperEdges) more than one to form any kind of SuperHyperEdges or any number of SuperHyperEdges. Let us consider the extreme 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 extreme SuperHyperSet of the extreme SuperHyperVertices has the eligibilities to propose property such that there's no extreme SuperHyperVertex of an extreme SuperHyperEdge is common and there's an extreme SuperHyperEdge for all extreme SuperHyperVertices but the maximum extreme

cardinality indicates that these extreme type-SuperHyperSets couldn't give us the extreme lower bound in the term of extreme sharpness. In other words, the extreme 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 extreme SuperHyperVertices implies at least on-quasi-triangle style is up but sometimes the extreme 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 extreme 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 extreme 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 extreme structure of the extreme R-SuperHyperMatching decorates the extreme SuperHyperVertices don't have received any extreme connections so as this extreme style implies different versions of extreme SuperHyperEdges with the maximum extreme cardinality in the terms of extreme SuperHyperVertices are spotlight. The lower extreme bound is to have the maximum extreme groups of extreme SuperHyperVertices have perfect extreme connections inside each of SuperHyperEdges and the outside of this extreme SuperHyperSet doesn't matter but regarding the connectedness of the used extreme SuperHyperGraph arising from its extreme properties taken from the fact that it's simple. If there's no more than one extreme SuperHyperVertex in the targeted extreme SuperHyperSet, then there's no extreme connection. Furthermore, the extreme existence of one extreme SuperHyperVertex has no extreme effect to talk about the extreme R-SuperHyperMatching. Since at least two extreme SuperHyperVertices involve to make a title in the extreme background of the extreme SuperHyperGraph. The extreme SuperHyperGraph is

obvious if it has no extreme SuperHyperEdge but at least two extreme SuperHyperVertices make the extreme version of extreme SuperHyperEdge. Thus in the extreme setting of non-obvious extreme SuperHyperGraph, there are at least one extreme SuperHyperEdge. It's necessary to mention that the word "Simple" is used as extreme adjective for the initial extreme SuperHyperGraph, induces there's no extreme appearance of the loop extreme version of the extreme SuperHyperEdge and this extreme SuperHyperGraph is said to be loopless. The extreme adjective "loop" on the basic extreme framework engages one extreme SuperHyperVertex but it never happens in this extreme setting. With these extreme bases, on an extreme SuperHyperGraph, there's at least one extreme SuperHyperEdge thus there's at least an extreme R-SuperHyperMatching has the extreme cardinality of an extreme SuperHyperEdge. Thus, an extreme R-SuperHyperMatching has the extreme cardinality at least an extreme SuperHyperEdge. Assume an extreme SuperHyperSet $V \setminus V \setminus \{z\}$. This extreme SuperHyperSet isn't an extreme R-SuperHyperMatching since either the extreme SuperHyperGraph is an obvious extreme SuperHyperModel thus it never happens since there's no extreme usage of this extreme framework and even more there's no extreme connection inside or the extreme SuperHyperGraph isn't obvious and as its consequences, there's an extreme contradiction with the term "extreme R-SuperHyperMatching" since the maximum extreme cardinality never happens for this extreme style of the extreme SuperHyperSet and beyond that there's no extreme connection inside as mentioned in first extreme case in the forms of drawback for this selected extreme 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 extreme case implies having the extreme style of on-quasi-triangle extreme style on the every extreme elements of this extreme SuperHyperSet. Precisely, the extreme R-SuperHyperMatching is the extreme SuperHyperSet of the extreme SuperHyperVertices such that some extreme amount of the extreme SuperHyperVertices are on-quasi-triangle extreme style. The extreme 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 extreme 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 extreme bound is up. Thus the minimum extreme cardinality of the maximum extreme cardinality ends up the extreme discussion. The first extreme term refers to the extreme setting of the extreme SuperHyperGraph but this key point is enough since there's an extreme SuperHyperClass of an extreme SuperHyperGraph has no on-quasi-triangle extreme style amid some amount of its extreme SuperHyperVertices. This extreme setting of the extreme SuperHyperModel proposes an extreme SuperHyperSet has only some amount extreme SuperHyperVertices from one extreme SuperHyperEdge such that there's no extreme amount of extreme SuperHyperEdges more than one involving these some amount of these extreme SuperHyperVertices. The extreme cardinality of this extreme SuperHyperSet is the maximum and the extreme case is occurred in the minimum extreme situation. To sum them up, the extreme 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 extreme 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 extreme SuperHyperVertices such that there's distinct-covers-order-amount extreme SuperHyperEdges for amount of extreme SuperHyperVertices taken from the extreme 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 extreme SuperHyperSet of the extreme 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 extreme R-SuperHyperMatching for the extreme SuperHyperGraph as used extreme background in the extreme terms of worst extreme case and the common theme of the lower extreme bound occurred in the specific extreme SuperHyperClasses of the extreme SuperHyperGraphs which are extreme free-quasi-triangle.

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

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

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

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

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

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

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 extreme R-SuperHyperMatching. Let $Z_i \overset{E}{\sim} Z_j$, be defined as Z_i and Z_j are the extreme SuperHyperVertices belong to the extreme 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,

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

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

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

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

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

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

The main definition of the extreme R-SuperHyperMatching has two titles. An extreme quasi-R-SuperHyperMatching and its corresponded quasi-maximum extreme R-SuperHyperCardinality are two titles in the terms of quasi-R-styles. For any extreme number, there's an extreme quasi-R-SuperHyperMatching with that quasi-maximum extreme SuperHyperCardinality in the terms of the embedded extreme SuperHyperGraph. If there's an embedded extreme SuperHyperGraph, then the extreme quasi-SuperHyperNotions lead us to take the collection of all the extreme quasi-R-SuperHyperMatchings for all extreme numbers less than its extreme corresponded maximum number. The essence of the extreme SuperHyperMatching ends up but this essence starts up in the terms of the extreme quasi-R-SuperHyperMatching, again and more in the operations of collecting all the extreme quasi-R-SuperHyperMatchings acted on the all possible used formations of the extreme SuperHyperGraph to achieve one extreme number. This extreme number is considered as the equivalence class for all corresponded quasi-R-SuperHyperMatchings. Let $z_{\text{Extreme Number}}$, $S_{\text{Extreme SuperHyperSet}}$ and $G_{\text{Extreme SuperHyperMatching}}$ be an extreme number, an extreme SuperHyperSet and an extreme SuperHyperMatching. Then

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

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

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

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

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

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

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

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

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

And then,

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

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

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

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

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

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

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

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

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

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

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

And with go back to initial structure,

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

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

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

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

Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme 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 extreme SuperHyperSet of extreme SuperHyperVertices is the simple extreme type-SuperHyperSet of the extreme 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 extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. The extreme SuperHyperSet of the extreme 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 **extreme R-SuperHyperMatching** $\mathcal{C}(ESHG)$ for an extreme SuperHyperGraph $ESHG : (V, E)$ is an extreme type-SuperHyperSet with **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's no an extreme SuperHyperEdge amid some extreme SuperHyperVertices instead of all given by **extreme SuperHyperMatching** is related to the extreme SuperHyperSet of the extreme 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** extreme SuperHyperVertex **inside** the intended extreme SuperHyperSet. Thus the non-obvious extreme SuperHyperMatching is up. The obvious simple extreme type-SuperHyperSet called the extreme SuperHyperMatching is an extreme SuperHyperSet **includes** only **one** extreme SuperHyperVertex. But the extreme SuperHyperSet of extreme 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 extreme SuperHyperSet since they've come from at least so far an SuperHyperEdge. Thus the non-obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching **is** up. To sum them up, the extreme SuperHyperSet of extreme 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 extreme type-SuperHyperSet of the extreme R-SuperHyperMatching. Since the extreme SuperHyperSet of the extreme SuperHyperVertices,

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

or

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

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

extreme 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 an extreme free-triangle embedded SuperHyperModel and an extreme on-triangle embedded SuperHyperModel but also it's an extreme stable embedded SuperHyperModel. But all only non-obvious simple extreme type-SuperHyperSets of the extreme R-SuperHyperMatching amid those obvious simple extreme type-SuperHyperSets of the extreme 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 extreme 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 an extreme R-SuperHyperMatching. In other words, the least cardinality, the lower sharp bound for the cardinality, of an extreme 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 extreme SuperHyperGraph $ESHG : (V, E)$. The all interior extreme SuperHyperVertices belong to any extreme quasi-R-SuperHyperMatching if for any of them, and any of other corresponded extreme SuperHyperVertex, some interior extreme SuperHyperVertices are mutually extreme SuperHyperNeighbors with no extreme exception at all minus all extreme SuperHypeNeighbors to any amount of them.
Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. Let an extreme SuperHyperEdge $ESHE : E \in E_{ESHG:(V,E)}$ has some extreme SuperHyperVertices r. Consider all extreme numbers of those extreme SuperHyperVertices from that extreme SuperHyperEdge excluding excluding more than r distinct extreme SuperHyperVertices, exclude to any given extreme SuperHyperSet of the extreme SuperHyperVertices. Consider there's an extreme R-SuperHyperMatching with the least cardinality, the lower sharp extreme bound for extreme cardinality. Assume a connected extreme SuperHyperGraph $ESHG : (V, E)$. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \setminus \{z\}$ is an extreme SuperHyperSet S of the extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely but it isn't an extreme R-SuperHyperMatching. Since it doesn't have **the maximum extreme cardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices such that there's an extreme SuperHyperEdge to have some SuperHyperVertices uniquely. The extreme SuperHyperSet of the extreme SuperHyperVertices $V_{ESHE} \cup \{z\}$ is the maximum extreme cardinality of an extreme SuperHyperSet S of extreme SuperHyperVertices but it isn't an extreme R-SuperHyperMatching. Since it **doesn't do** the extreme procedure such that such that there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely [there are at least one extreme SuperHyperVertex outside implying there's, sometimes in the connected extreme SuperHyperGraph $ESHG : (V, E)$, an extreme SuperHyperVertex, titled its extreme SuperHyperNeighbor, to that extreme SuperHyperVertex in the extreme SuperHyperSet S so as S doesn't do "the extreme procedure".]. There's only **one** extreme SuperHyperVertex **outside** the intended extreme SuperHyperSet, $V_{ESHE} \cup \{z\}$, in the terms of extreme SuperHyperNeighborhood. Thus the obvious extreme R-SuperHyperMatching, V_{ESHE} is up. The obvious simple extreme type-SuperHyperSet of the extreme R-SuperHyperMatching, V_{ESHE}, **is** an extreme SuperHyperSet, V_{ESHE}, **includes** only **all** extreme SuperHyperVertices does forms any kind of extreme pairs are titled extreme SuperHyperNeighbors in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Since the extreme SuperHyperSet of the extreme SuperHyperVertices V_{ESHE}, is the **maximum extreme SuperHyperCardinality** of an extreme SuperHyperSet S of extreme SuperHyperVertices **such that** there's an extreme SuperHyperEdge to have some extreme SuperHyperVertices uniquely. Thus, in a connected extreme SuperHyperGraph $ESHG : (V, E)$. Any extreme R-SuperHyperMatching only contains all interior extreme SuperHyperVertices and all exterior extreme SuperHyperVertices from the unique extreme SuperHyperEdge where there's any of them has all possible extreme SuperHyperNeighbors in and there's all extreme SuperHyperNeighborhoods in with no exception minus all extreme SuperHypeNeighbors to some of them not all of them but everything is possible about extreme SuperHyperNeighborhoods and extreme SuperHyperNeighbors out.
The SuperHyperNotion, namely, SuperHyperMatching, is up. There's neither empty SuperHyperEdge nor loop SuperHyperEdge. The following extreme SuperHyperSet of extreme SuperHyperEdges[SuperHyperVertices] is the simple extreme type-SuperHyperSet

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

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

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

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

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

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

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

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

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

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

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

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

Thus the non-obvious extreme SuperHyperMatching,

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

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

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

Is the extreme SuperHyperSet, not:

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

Does includes only less than three SuperHyperVertices in a connected extreme 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 extreme type-SuperHyperSets called the

extreme SuperHyperMatching,

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is only and only

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

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

Example 26. In the extreme Figure (??), the connected extreme SuperHyperWheel $NSHW : (V, E)$, is extreme highlighted and featured. The obtained extreme SuperHyperSet, by the Algorithm in previous result, of the extreme SuperHyperVertices of the connected extreme SuperHyperWheel $ESHW : (V, E)$, in the extreme SuperHyperModel (??), is the extreme SuperHyperMatching.

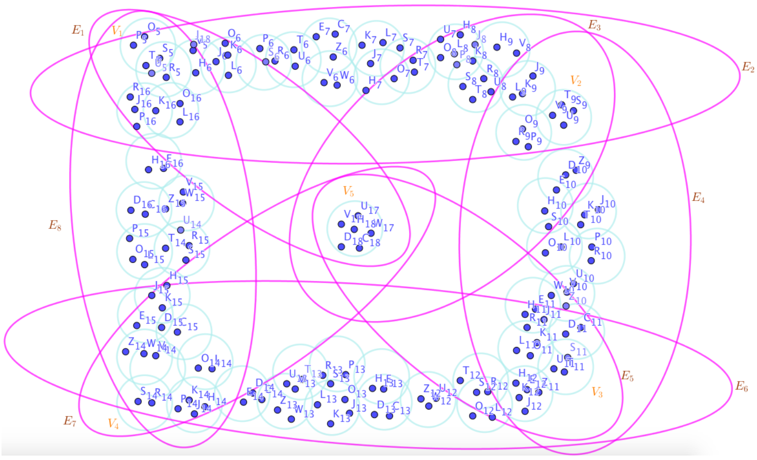

Figure 26. An extreme SuperHyperWheel extreme Associated to the extreme Notions of extreme SuperHyperMatching in the extreme Example (26)

6. General extreme Results

For the extreme SuperHyperMatching theory and neutrosophic SuperHyperMatching theory, some general results are introduced in the setting of SuperHyperGraph theory and neutrosophic SuperHyperGraph theory.

Remark 27. Let remind that the extreme SuperHyperMatching is "redefined" on the positions of the alphabets.

Corollary 28. *Assume extreme SuperHyperMatching. Then*

$$\begin{aligned}
&extreme\ extremeSuperHyperMatching =\\
&\{theextremeSuperHyperMatchingoftheSuperHyperVertices\ |\\
&\max |SuperHyperOffensiveSuperHyper\\
&Clique|_{extremecardinalityamidthoseextremeSuperHyperMatching.}\}
\end{aligned}$$

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 extreme SuperHyperGraph on the same identical letter of the alphabet. Then the notion of extreme SuperHyperMatching and extreme SuperHyperMatching coincide.*

Corollary 30. *Assume a extreme SuperHyperGraph on the same identical letter of the alphabet. Then a consecutive sequence of the SuperHyperVertices is a extreme SuperHyperMatching if and only if it's a extreme SuperHyperMatching.*

Corollary 31. *Assume a extreme 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 extreme SuperHyperGraph on the same identical letter of the alphabet. Then its extreme SuperHyperMatching is its extreme SuperHyperMatching and reversely.*

Corollary 33. *Assume a extreme SuperHyperPath(-/SuperHyperCycle, SuperHyperStar, SuperHyperBipartite, SuperHyperMultipartite, SuperHyperWheel) on the same identical letter of the alphabet. Then its extreme SuperHyperMatching is its extreme SuperHyperMatching and reversely.*

Corollary 34. *Assume a extreme SuperHyperGraph. Then its extreme SuperHyperMatching isn't well-defined if and only if its extreme SuperHyperMatching isn't well-defined.*

Corollary 35. *Assume SuperHyperClasses of a extreme SuperHyperGraph. Then its extreme SuperHyperMatching isn't well-defined if and only if its extreme SuperHyperMatching isn't well-defined.*

Corollary 36. *Assume a extreme SuperHyperPath(-/SuperHyperCycle, SuperHyperStar, SuperHyperBipartite, SuperHyperMultipartite, SuperHyperWheel). Then its extreme SuperHyperMatching isn't well-defined if and only if its extreme SuperHyperMatching isn't well-defined.*

Corollary 37. *Assume a extreme SuperHyperGraph. Then its extreme SuperHyperMatching is well-defined if and only if its extreme SuperHyperMatching is well-defined.*

Corollary 38. *Assume SuperHyperClasses of a extreme SuperHyperGraph. Then its extreme SuperHyperMatching is well-defined if and only if its extreme SuperHyperMatching is well-defined.*

Corollary 39. *Assume a extreme SuperHyperPath(-/SuperHyperCycle, SuperHyperStar, SuperHyperBipartite, SuperHyperMultipartite, SuperHyperWheel). Then its extreme SuperHyperMatching is well-defined if and only if its extreme SuperHyperMatching is well-defined.*

Proposition 40. *Let $ESHG : (V, E)$ be a extreme SuperHyperGraph. Then V is*

(i) : *the dual SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *the strong dual SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *the connected dual SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : *the δ-dual SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *the strong δ-dual SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *the connected δ-dual SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 41. *Let $NTG : (V, E, \sigma, \mu)$ be a extreme SuperHyperGraph. Then $\emptyset$ is*

(i) : *the SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *the strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *the connected defensive SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : *the δ-SuperHyperDefensive extreme SuperHyperMatching;*

(v) : *the strong* δ*-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *the connected* δ*-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 42. *Let* $ESHG : (V, E)$ *be a extreme SuperHyperGraph. Then an independent SuperHyperSet is*

(i) : *the SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *the strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *the connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : *the* δ*-SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *the strong* δ*-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *the connected* δ*-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 43. *Let* $ESHG : (V, E)$ *be a extreme SuperHyperUniform SuperHyperGraph which is a SuperHyperCycle/SuperHyperPath. Then* V *is a maximal*

(i) : *SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : $\mathcal{O}(ESHG)$*-SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* $\mathcal{O}(ESHG)$*-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* $\mathcal{O}(ESHG)$*-SuperHyperDefensive extreme SuperHyperMatching;*

Where the exterior SuperHyperVertices and the interior SuperHyperVertices coincide.

Proposition 44. *Let* $ESHG : (V, E)$ *be a extreme SuperHyperGraph which is a SuperHyperUniform SuperHyperWheel. Then* V *is a maximal*

(i) : *dual SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *strong dual SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected dual SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : $\mathcal{O}(ESHG)$*-dual SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* $\mathcal{O}(ESHG)$*-dual SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* $\mathcal{O}(ESHG)$*-dual SuperHyperDefensive extreme SuperHyperMatching;*

Where the exterior SuperHyperVertices and the interior SuperHyperVertices coincide.

Proposition 45. *Let* $ESHG : (V, E)$ *be a extreme SuperHyperUniform SuperHyperGraph which is a SuperHyperCycle/SuperHyperPath. Then the number of*

(i) : *the extreme SuperHyperMatching;*
(ii) : *the extreme SuperHyperMatching;*
(iii) : *the connected extreme SuperHyperMatching;*
(iv) : *the* $\mathcal{O}(ESHG)$*-extreme SuperHyperMatching;*
(v) : *the strong* $\mathcal{O}(ESHG)$*-extreme SuperHyperMatching;*
(vi) : *the connected* $\mathcal{O}(ESHG)$*-extreme 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 extreme SuperHyperUniform SuperHyperGraph which is a SuperHyperWheel. Then the number of*

(i) : *the dual extreme SuperHyperMatching;*
(ii) : *the dual extreme SuperHyperMatching;*
(iii) : *the dual connected extreme SuperHyperMatching;*
(iv) : *the dual* $\mathcal{O}(ESHG)$*-extreme SuperHyperMatching;*
(v) : *the strong dual* $\mathcal{O}(ESHG)$*-extreme SuperHyperMatching;*
(vi) : *the connected dual* $\mathcal{O}(ESHG)$*-extreme 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 extreme 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 extreme SuperHyperMatching;*
(ii) : *strong dual SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected dual SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 48. *Let $ESHG : (V, E)$ be a extreme 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 extreme SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : *δ-SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong δ-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected δ-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 49. *Let $ESHG : (V, E)$ be a extreme SuperHyperUniform SuperHyperGraph which is a SuperHyperStar/SuperHyperComplete SuperHyperBipartite/SuperHyperComplete SuperHyperMultipartite. Then Then the number of*

(i) : *dual SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *strong dual SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected dual SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* $\frac{\mathcal{O}(ESHG)}{2} + 1$*-dual SuperHyperDefensive extreme 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 extreme SuperHyperGraph. The number of connected component is $|V - S|$ if there's a SuperHyperSet which is a dual*

(i) : *SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : *extreme SuperHyperMatching;*
(v) : *strong 1-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected 1-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 51. *Let $ESHG : (V, E)$ be a extreme SuperHyperGraph. Then the number is at most $\mathcal{O}(ESHG)$ and the extreme number is at most $\mathcal{O}_n(ESHG)$.*

Proposition 52. *Let ESHG* : (V, E) *be a extreme SuperHyperGraph which is SuperHyperComplete. The number is* $\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1$ *and the extreme 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 extreme SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 53. *Let ESHG* : (V, E) *be a extreme SuperHyperGraph which is* $\emptyset$*. The number is* 0 *and the extreme number is* 0*, for an independent SuperHyperSet in the setting of dual*

(i) : *SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : 0*-SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* 0*-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* 0*-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 54. *Let ESHG* : (V, E) *be a extreme SuperHyperGraph which is SuperHyperComplete. Then there's no independent SuperHyperSet.*

Proposition 55. *Let ESHG* : (V, E) *be a extreme SuperHyperGraph which is SuperHyperCycle/SuperHyperPath/SuperHyperWheel. The number is* $\mathcal{O}(ESHG : (V, E))$ *and the extreme number is* $\mathcal{O}_n(ESHG : (V, E))$*, in the setting of a dual*

(i) : *SuperHyperDefensive extreme SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : $\mathcal{O}(ESHG : (V, E))$*-SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* $\mathcal{O}(ESHG : (V, E))$*-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* $\mathcal{O}(ESHG : (V, E))$*-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 56. *Let ESHG* : (V, E) *be a extreme SuperHyperGraph which is SuperHyperStar/complete SuperHyperBipartite/complete SuperHyperMultiPartite. The number is* $\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1$ *and the extreme 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 extreme SuperHyperMatching;*
(ii) : *strong SuperHyperDefensive extreme SuperHyperMatching;*
(iii) : *connected SuperHyperDefensive extreme SuperHyperMatching;*
(iv) : $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive extreme SuperHyperMatching;*
(v) : *strong* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive extreme SuperHyperMatching;*
(vi) : *connected* $(\frac{\mathcal{O}(ESHG:(V,E))}{2} + 1)$*-SuperHyperDefensive extreme SuperHyperMatching.*

Proposition 57. *Let* $\mathcal{NSHF}$: (V, E) *be a SuperHyperFamily of the ESHGs* : (V, E) *extreme 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 extreme SuperHyperGraphs.*

Proposition 58. *Let ESHG* : (V, E) *be a strong extreme SuperHyperGraph. If* S *is a dual SuperHyperDefensive extreme SuperHyperMatching, then* $\forall v \in V \setminus S$, $\exists x \in S$ *such that*

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(i) $v \in N_s(x)$;
(ii) $vx \in E$.

Proposition 59. *Let $ESHG : (V, E)$ be a strong extreme SuperHyperGraph. If S is a dual SuperHyperDefensive extreme 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 extreme SuperHyperGraph. Then*

(i) $\Gamma \leq \mathcal{O}$;
(ii) $\Gamma_s \leq \mathcal{O}_n$.

Proposition 61. *Let $ESHG : (V, E)$ be a strong extreme 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 extreme 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 extreme 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 extreme 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 extreme 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 extreme 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 extreme 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 extreme 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 extreme SuperHyperMatching.*

Proposition 66. *Let $ESHG : (V, E)$ be SuperHyperStar. Then*

(i) *the SuperHyperSet $S = \{c\}$ is a dual maximal extreme 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 extreme 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 extreme 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 extreme 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 extreme 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 extreme 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 extreme 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 extreme SuperHyperMatching.*

Proposition 70. *Let* $\mathcal{NSHF} : (V, E)$ *be a m-SuperHyperFamily of extreme SuperHyperStars with common extreme SuperHyperVertex SuperHyperSet. Then*

(i) *the SuperHyperSet* $S = \{c_1, c_2, \cdots, c_m\}$ *is a dual SuperHyperDefensive extreme 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 extreme SuperHyperMatching for* $\mathcal{NSHF} : (V, E)$.

Proposition 71. *Let* $\mathcal{NSHF} : (V, E)$ *be an m-SuperHyperFamily of odd SuperHyperComplete SuperHyperGraphs with common extreme SuperHyperVertex SuperHyperSet. Then*

(i) *the SuperHyperSet* $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor + 1}$ *is a dual maximal SuperHyperDefensive extreme 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 extreme SuperHyperMatching for* $\mathcal{NSHF} : (V, E)$.

Proposition 72. *Let* $\mathcal{NSHF} : (V, E)$ *be a m-SuperHyperFamily of even SuperHyperComplete SuperHyperGraphs with common extreme SuperHyperVertex SuperHyperSet. Then*

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(i) the SuperHyperSet $S = \{v_i\}_{i=1}^{\lfloor \frac{n}{2} \rfloor}$ is a dual SuperHyperDefensive extreme 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 extreme SuperHyperMatching for $\mathcal{NSHF} : (V, E)$.

Proposition 73. *Let ESHG : (V, E) be a strong extreme SuperHyperGraph. Then following statements hold;*

(i) if $s \geq t$ and a SuperHyperSet S of SuperHyperVertices is an t-SuperHyperDefensive extreme SuperHyperMatching, then S is an s-SuperHyperDefensive extreme SuperHyperMatching;
(ii) if $s \leq t$ and a SuperHyperSet S of SuperHyperVertices is a dual t-SuperHyperDefensive extreme SuperHyperMatching, then S is a dual s-SuperHyperDefensive extreme SuperHyperMatching.

Proposition 74. *Let ESHG : (V, E) be a strong extreme SuperHyperGraph. Then following statements hold;*

(i) if $s \geq t + 2$ and a SuperHyperSet S of SuperHyperVertices is an t-SuperHyperDefensive extreme SuperHyperMatching, then S is an s-SuperHyperPowerful extreme SuperHyperMatching;
(ii) if $s \leq t$ and a SuperHyperSet S of SuperHyperVertices is a dual t-SuperHyperDefensive extreme SuperHyperMatching, then S is a dual s-SuperHyperPowerful extreme SuperHyperMatching.

Proposition 75. *Let ESHG : (V, E) be a[an] [r-]SuperHyperUniform-strong-extreme 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 extreme 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 extreme SuperHyperMatching;
(iii) if $\forall a \in S$, $|N_s(a) \cap V \setminus S| = 0$, then ESHG : (V, E) is an r-SuperHyperDefensive extreme 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 extreme SuperHyperMatching.

Proposition 76. *Let ESHG : (V, E) is a[an] [r-]SuperHyperUniform-strong-extreme 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 extreme 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 extreme SuperHyperMatching;
(iii) $\forall a \in S$, $|N_s(a) \cap V \setminus S| = 0$ if ESHG : (V, E) is an r-SuperHyperDefensive extreme 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 extreme SuperHyperMatching.

Proposition 77. *Let ESHG : (V, E) is a[an] [r-]SuperHyperUniform-strong-extreme 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 extreme 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 extreme SuperHyperMatching;
(iii) $\forall a \in S$, $|N_s(a) \cap V \setminus S| = 0$ if ESHG : (V, E) is an $(\mathcal{O} - 1)$-SuperHyperDefensive extreme 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 extreme SuperHyperMatching.*

Proposition 78. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-extreme 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 extreme 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 extreme SuperHyperMatching;*
(iii) *if* $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$*, then* $ESHG : (V, E)$ *is* $(\mathcal{O} - 1)$*-SuperHyperDefensive extreme 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 extreme SuperHyperMatching.*

Proposition 79. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-extreme 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 extreme SuperHyperMatching;*
(ii) $\forall a \in V \setminus S,\ |N_s(a) \cap S| > 2$ *if* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive extreme SuperHyperMatching;*
(iii) $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$ *if* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive extreme 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 extreme SuperHyperMatching.*

Proposition 80. *Let* $ESHG : (V, E)$ *is a[an] [r-]SuperHyperUniform-strong-extreme 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 extreme SuperHyperMatching;*
(ii) *if* $\forall a \in V \setminus S,\ |N_s(a) \cap S| > 2$*, then* $ESHG : (V, E)$ *is a dual 2-SuperHyperDefensive extreme SuperHyperMatching;*
(iii) *if* $\forall a \in S,\ |N_s(a) \cap V \setminus S| = 0$*, then* $ESHG : (V, E)$ *is an 2-SuperHyperDefensive extreme 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 extreme SuperHyperMatching.*

7. Extreme Problems and Extreme Questions

In what follows, some "extreme problems" and some "extreme questions" are extremely proposed. The SuperHyperMatching and the extreme SuperHyperMatching are extremely defined on a real-world extreme application, titled "Cancer's extreme recognitions".

Question 81. *Which the else extreme SuperHyperModels could be defined based on Cancer's extreme recognitions?*

Question 82. *Are there some extreme SuperHyperNotions related to SuperHyperMatching and the extreme SuperHyperMatching?*

Question 83. *Are there some extreme Algorithms to be defined on the extreme SuperHyperModels to compute them extremely?*

Question 84. *Which the extreme SuperHyperNotions are related to beyond the SuperHyperMatching and the extreme SuperHyperMatching?*

Problem 85. *The SuperHyperMatching and the extreme SuperHyperMatching do extremely a extreme SuperHyperModel for the Cancer's extreme recognitions and they're based extremely on extreme SuperHyperMatching, are there else extremely?*

Problem 86. *Which the fundamental extreme SuperHyperNumbers are related to these extreme SuperHyperNumbers types-results?*

Problem 87. *What's the independent research based on Cancer's extreme recognitions concerning the multiple types of extreme SuperHyperNotions?*

In the Table (1), benefits and avenues for this research are, figured out pointed out and spoken out.

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

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