

**voloshin-hypergraph: residuals**

equations measured 2026-09-05T13:35:48Z against the model of 2026-09-01

Corrected (3)

| Identifier                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Page | Conf.   | LaTeX source                                                                                                                                          | Rendered                                                                                                                                              | Scan image                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| voloshin-hypergraph_<br>EQ0133 (was)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 170  | ■ 0.340 | $(\mathcal{H})_2=(X,\mathcal{E})\text{ where }\left\{x_i,x_j\right\}\in\mathcal{E}\Leftrightarrow\mathcal{D}(x_i)\cap\mathcal{D}(x_j)\neq\mathbb{O}.$ | $(\mathcal{H})_2=(X,\mathcal{E})\text{ where }\left\{x_i,x_j\right\}\in\mathcal{E}\Leftrightarrow\mathcal{D}(x_i)\cap\mathcal{D}(x_j)\neq\mathbb{O}.$ | $(\mathcal{H})_2=(X,\mathcal{E})\text{ where }\left\{x_i,x_j\right\}\in\mathcal{E}\Leftrightarrow\mathcal{D}(x_i)\cap\mathcal{D}(x_j)\neq\emptyset.$ |
| voloshin-hypergraph_<br>EQ0133 (now)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 170  | —       | $(\mathcal{H})_2=(X,\mathcal{E})\text{ where }\left\{x_i,x_j\right\}\in\mathcal{E}\Leftrightarrow\mathcal{D}(x_i)\cap\mathcal{D}(x_j)\neq\emptyset.$  | $(\mathcal{H})_2=(X,\mathcal{E})\text{ where }\left\{x_i,x_j\right\}\in\mathcal{E}\Leftrightarrow\mathcal{D}(x_i)\cap\mathcal{D}(x_j)\neq\emptyset.$  | $(\mathcal{H})_2=(X,\mathcal{E})\text{ where }\left\{x_i,x_j\right\}\in\mathcal{E}\Leftrightarrow\mathcal{D}(x_i)\cap\mathcal{D}(x_j)\neq\emptyset.$ |
| basis: inferred / ink                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |         |                                                                                                                                                       |                                                                                                                                                       |                                                                                                                                                      |
| voloshin-hypergraph_<br>EQ0141 (was)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 185  | ■ 0.473 | $\tau(\mathcal{H})=\nu(\mathcal{H})$ .                                                                                                                | $\tau(\mathcal{H})=\nu(\mathcal{H}).$                                                                                                                 | $\tau(\mathcal{H})=\nu(\mathcal{H}).$                                                                                                                |
| voloshin-hypergraph_<br>EQ0141 (now)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 185  | —       | $\tau(\mathcal{H})=\nu(\mathcal{H})$ . a hypergraph, draw                                                                                             | $\tau(\mathcal{H})=\nu(\mathcal{H}).ahypergraph,draw$                                                                                                 | $\tau(\mathcal{H})=\nu(\mathcal{H}).$                                                                                                                |
| basis: inferred / ink                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |         |                                                                                                                                                       |                                                                                                                                                       |                                                                                                                                                      |
| voloshin-hypergraph_<br>EQ0197 (was)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 220  | ■ 0.500 | $\chi(\mathcal{H})=\bar{\chi}(\mathcal{H})=0,\quad R(\mathcal{H})=(0,0,\ldots,0),\quad P(\mathcal{H},\lambda)=0.$                                     | $\chi(\mathcal{H})=\bar{\chi}(\mathcal{H})=0,\quad R(\mathcal{H})=(0,0,\ldots,0),\quad P(\mathcal{H},\lambda)=0.$                                     | $\chi(\mathcal{H})=\bar{\chi}(\mathcal{H})=0,\quad R(\mathcal{H})=(0,0,\ldots,0),\quad P(\mathcal{H},\lambda)=0.$                                    |
| voloshin-hypergraph_<br>EQ0197 (now)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 220  | —       | en the incidence matrix of a hypergraph, construct the edge list.                                                                                     | <i>entheincidencematrixofahypergraph,constructtheedgelist.</i>                                                                                        | $\chi(\mathcal{H})=\bar{\chi}(\mathcal{H})=0,\quad R(\mathcal{H})=(0,0,\ldots,0),\quad P(\mathcal{H},\lambda)=0.$                                    |
| basis: inferred / ink                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |         |                                                                                                                                                       |                                                                                                                                                       |                                                                                                                                                      |
| <p><b>Conf.</b> MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ &lt;0.5 — no value</p> <p><b>LaTeX source</b> MathPix’s reading, unchanged; <b>Rendered</b> the same reading, with a display environment (align/alignat/flalign/eqnarray/gather/multline/split) mapped to its in-math form so it can typeset in this cell — the two may legitimately differ</p> <p><b>Residual</b> render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured</p> <p><b>[refined: basis]</b> beside an identifier: the LaTeX-source and Rendered cells both show a VERIFIED refinement, not MathPix’s own reading — <i>basis</i> names what verified it (e.g. ink, source). The original reading is unchanged in the model but is not the one drawn here.</p> |      |         |                                                                                                                                                       |                                                                                                                                                       |                                                                                                                                                      |