

$$\begin{vmatrix} k_6 & k_7 & abcde \\ k_7 & k_6 & abcde \end{vmatrix} = 0$$

$$k_6 k_7 \cdot |k_6 abcde| = \sum \pm k_6 k_7 e \begin{vmatrix} k_6 abcde \\ k_6 abcde \end{vmatrix} = k_6 k_7 e^2 \frac{abcde}{e} = \sum \pm k_6 k_7 e \frac{abc \cdot ca}{|abc|}$$

$$k_6 k_7 = \sum_1^5 k_6 k_7 e \frac{abc \cdot ca}{|abc|}$$

Proof of \$k_7 e\$

$$\frac{S}{abcd} \left\{ \sum \pm \frac{e}{abcd} \cdot \frac{cdag \cdot bdeg \cdot beag \cdot bdag \cdot bcde}{bc \cdot cd \cdot ab} \cdot \frac{bc \cdot cd \cdot ab}{bcde} \right.$$

$$\frac{abcd}{e} \cdot \frac{ab \cdot cd \cdot be \cdot cf \cdot ad \cdot ae \cdot af \cdot \dots}{\dots}$$

$$\frac{S}{abcd \cdot ga \cdot gb \cdot ge \cdot gd \cdot ge \cdot ea \cdot db \cdot ce \cdot ed} \left\{ \sum \pm \frac{e}{abcd} \cdot \frac{cdag \cdot bdeg \cdot beag \cdot bdag \cdot ga \cdot ea}{\dots} \right.$$

and if
and if

$$\begin{vmatrix} k_7 & k_6 & k_1 & k_2 & k_3 & k_4 & e \\ k_6 & k_7 & a & b & c & d & e \end{vmatrix} = 0$$

\$k_6 k_7\$

$$\frac{k_6 abc}{e abc} = \frac{k_6 \cdot e \cdot abc}{e^2 abc} = \frac{k_6 abc}{e^2 abc}$$

$$k_6 abc (e^2) = \frac{abc \cdot bc \cdot ca}{e abc} \cdot \frac{e abc}{e abc} = -k_6 \frac{abcde}{e} \frac{abc \cdot ca}{|abc|}$$

$$\begin{vmatrix} k_6 & k_7 & k_1 & k_2 & k_3 & k_4 & e \\ k_7 & k_6 & a & b & c & d & e \end{vmatrix} = 0$$

$$k_6 k_7 = K_1 K_2 \cdot ab \quad \text{where } K_1 = \frac{bcdef}{bcdf} \cdot \frac{bc \cdot cd \cdot be \cdot cf \cdot ad \cdot ae \cdot af \cdot \dots}{bcdf \cdot bcdf \cdot bcde \cdot cdaf \cdot ab \cdot ca \cdot da \cdot ab}$$

$$k_6 k_7 = \frac{k_6 abcde}{e^2} = -k_6 k_7 abcde + k_6 k_7 abcde - k_6 k_7 abcde + k_6 k_7 abcde$$

$$k_6 k_7 k_1 k_2 k_3 k_4 = abcde \cdot \frac{k_1 k_2 k_3 k_4 e}{k_1 a \cdot k_2 b \cdot k_3 c \cdot k_4 d} H_7$$

$$k_1 k_2 k_3 k_4 k_5 = \frac{k_1 k_2 k_3 k_4 k_5}{k} = k_1 k_2 k_3 k_4 k_5 - k_1 k_2 k_3 k_4 k_5 + k_1 k_2 k_3 k_4 k_5$$

$$= H_7 \left\{ \frac{k_1 k_2 k_3 k_4 k_5}{k_1 a \cdot k_2 b \cdot k_3 c \cdot k_4 d \cdot k_5 e} + k_1 k_2 k_3 \cdot abcde \cdot \frac{k_4}{k_5} - k_1 k_2 abcde \cdot \frac{k_3}{k_4} + k_1 k_2 k_3 \cdot abcde \cdot \frac{k_2}{k_3} \right\}$$

$$= -H_7 \cdot \frac{k_1 k_2 k_3 k_4 k_5}{k_1 a \cdot k_2 b \cdot k_3 c \cdot k_4 d \cdot k_5 e} \cdot \frac{bcdef}{e} \cdot \frac{acdef}{e} \cdot \frac{1}{|cdef|} \left\{ k_1 \frac{abcde}{acdf \cdot bcdf} \cdot de \cdot ef \cdot fd - k_2 \frac{abcde}{acdf \cdot bcdf} \cdot ce \cdot ef \cdot fe + k_3 \frac{abcde}{acdf \cdot bcdf} \cdot cdaf \cdot fc \right\}$$

$$= -H_7 \cdot \frac{k_1 k_2 k_3 k_4 k_5}{k_1 a \cdot k_2 b \cdot k_3 c \cdot k_4 d \cdot k_5 e} \cdot \frac{bcdef}{e} \cdot \frac{acdef}{e} \cdot \frac{1}{|cdef|} \left\{ \frac{abc \cdot bc \cdot |abcd|}{|abcd| \cdot |abc|} - \frac{ad \cdot cd \cdot |abc|}{|abc| \cdot |abd|} + \frac{ae \cdot be \cdot |abcd|}{|abcd| \cdot |abef|} \right\}$$

$$k_1 k_2 k_3 k_4 k_5 = \frac{4 k_1 k_2 k_3 k_4 k_5}{k_1 a \cdot k_2 b \cdot k_3 c \cdot k_4 d \cdot k_5 e} \left\{ k_1 a \cdot bcde - k_2 abcde + k_3 abcde - k_4 abcde + k_5 abcde \right\} \quad \left\{ \dots \right\} = k_1 \cdot \frac{abcde}{e}$$

$$\frac{k_1 k_2 k_3 k_4 k_5}{k_1} = -H_7 \cdot \frac{bcdef}{e} \cdot \frac{acdef}{e} \left\{ ac \cdot bc \cdot |abcd| \cdot |abcd| \cdot |abc| \cdot \frac{abc \cdot abc}{e} - ad \cdot cd \cdot |abc| \cdot |abc| \cdot |abc| \cdot \frac{abc \cdot abc}{e} + ae \cdot be \cdot |abcd| \cdot |abc| \cdot |abc| \cdot \frac{abc \cdot abc}{e} \right\}$$

$$x_l = - \frac{a_{def} \cdot b_{def} \cdot c_{def}}{\frac{b_{def}}{e} \cdot \frac{a_{def}}{e} \cdot \frac{a_{def}}{e} \cdot d \cdot e \cdot f \cdot d} \left\{ \frac{x_{12}}{f_{12}} c_{def} \frac{a_{def}}{e} - \frac{x_{13}}{f_{13}} b_{def} \frac{a_{def}}{e} + \frac{x_{23}}{f_{23}} a_{def} \frac{b_{def}}{e} \right\}$$

$$y_x = \frac{y_a \cdot p_{ax}}{p_{ax}} + \frac{y_b \cdot p_{bx}}{p_{bx}} + \frac{y_c \cdot p_{cx}}{p_{cx}} + \frac{y_d \cdot p_{dx}}{p_{dx}} + \frac{y_e \cdot p_{ex}}{p_{ex}} + \frac{y_k \cdot p_x}{k_e}$$

$$\frac{p_{ax} \cdot \frac{b_{def}}{e} \cdot \frac{a_{def}}{e} \cdot \frac{a_{def}}{e} \cdot d \cdot e \cdot f \cdot d}{a_{def} \cdot b_{def} \cdot c_{def}} = - \frac{p_{24} p_{127}}{f_{27}} c_{def} \frac{a_{def}}{e} + \frac{p_{34} p_{317}}{f_{317}} b_{def} \frac{a_{def}}{e} - \frac{p_{24} p_{327}}{f_{327}} a_{def} \frac{b_{def}}{e}$$

$$\frac{x_{12}}{f_{12}} \cdot \frac{a_{def}}{e} \cdot \frac{a_{def}}{e} \cdot \frac{a_{def}}{e} - \frac{x_{13}}{f_{13}} \cdot \frac{a_{def}}{e} \cdot \frac{a_{def}}{e} \cdot \frac{a_{def}}{e}$$

Real
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