


$$\frac{1}{x}$$

ROVNICE S
NEZNÁMOU
V MENOVATELI

$$\frac{x+2}{2(x-1)} - \frac{2x}{3(x-1)} = \frac{1}{24} \quad | \cdot 24(x-1)$$



$$\textcircled{12} \quad 24(x-1) \cdot \frac{x+2}{2(x-1)} - \textcircled{8} \quad 24(x-1) \cdot \frac{2x}{3(x-1)} = 24(x-1) \cdot \frac{1}{24}$$

$$12(x+2) - 8 \cdot 2x = (x-1) \cdot 1$$

$$12x + 24 - 16x = x - 1$$

$$-4x + 24 = x - 1 \quad | -x$$

$$-5x + 24 = -1 \quad | -24$$

$$-5x = -25 \quad | : (-5)$$

$$x = 5$$

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SK.

$$L = \frac{x+2}{2(x-1)} - \frac{2x}{3(x-1)} = \frac{5+2}{2(5-1)} - \frac{2 \cdot 5}{3(5-1)} =$$

$$= \frac{7}{2 \cdot 4} - \frac{10}{3 \cdot 4} = \frac{7}{8} - \frac{10}{12} = \frac{21-20}{24} = \frac{1}{24} \checkmark$$

$$P = \frac{1}{24}$$

$$L = P$$

PODMIENNY

$$x \neq 1$$

$$\frac{4}{x-3} - \frac{3}{x-2} = \frac{1}{x-4} \quad / (x-2)(x-3)(x-4) \quad \boxed{\frac{1}{x}} \quad \textcircled{2}$$

$$(x-2)(x-3)(x-4) \cdot \frac{4}{(x-3)} - (x-2)(x-3)(x-4) \cdot \frac{3}{(x-2)} = (x-2)(x-3)(x-4) \cdot \frac{1}{(x-4)}$$

$$4(x-2)(x-4) - 3(x-3)(x-4) = (x-2)(x-3)$$

$$4(x^2 - 2x - 4x + 8) - 3(x^2 - 3x - 4x + 12) = x^2 - 2x - 3x + 6$$

$$4(x^2 - 6x + 8) - 3(x^2 - 7x + 12) = x^2 - 5x + 6$$

$$4x^2 - 24x + 32 - 3x^2 + 21x - 36 = x^2 - 5x + 6$$

$$x^2 - 3x - 4 = x^2 - 5x + 6 \quad / -x^2$$

$$-3x - 4 = -5x + 6 \quad / +5x$$

$$2x - 4 = 6 \quad / +4$$

$$2x = 10 \quad / :2$$

$$x = 5$$

$$\underline{\underline{x = 5}}$$

sk

$$\bar{L} = \frac{4}{x-3} - \frac{3}{x-2} = \frac{4}{5-3} - \frac{3}{5-2} = \frac{4}{2} - \frac{3}{3} = 2 - 1 = 1$$

$$P = \frac{1}{x-4} = \frac{1}{5-4} = \frac{1}{1} = 1 \checkmark$$

$$\bar{L} = P$$

PODMIENY

$$x \neq 2, x \neq 3, x \neq 4$$

$$\frac{x+2}{2x+2} - \frac{1}{2} = -\frac{x+4}{4x+4}$$



$$\frac{x+2}{2(x+1)} - \frac{1}{2} = -\frac{x+4}{4(x+1)} \quad | \cdot 4(x+1)$$

$$\textcircled{2} \quad \cancel{4(x+1)} \frac{x+2}{\cancel{2(x+1)}} - \cancel{4(x+1)} \frac{1}{2} = -\cancel{4(x+1)} \frac{x+4}{\cancel{4(x+1)}}$$

$$2(x+2) - 2(x+1) = -(x+4)$$

$$2x+4 - 2x-2 = -x-4$$

$$2 = -x-4 \quad | +4$$

$$6 = -x \quad | \cdot (-1)$$

$$\underline{\underline{x = -6}}$$

PODMIENIKY

$$x \neq -1$$

$$L = \frac{x+2}{2x+2} - \frac{1}{2} = \frac{-6+2}{2 \cdot (-6)+2} - \frac{1}{2} =$$

$$= \frac{-4}{-12+2} - \frac{1}{2} = \frac{-4}{-10} - \frac{1}{2} = \frac{2}{5} - \frac{1}{2} =$$

$$= \frac{4-5}{10} = \frac{-1}{10} \quad \checkmark$$

$$P = -\frac{x+4}{4x+4} = -\frac{-6+4}{4 \cdot (-6)+4} = -\frac{-2}{-24+4} =$$

$$= -\frac{-2}{-20} = -\frac{1}{10} \quad \checkmark$$

$$L = P$$

$$\frac{1}{3} - \frac{23-x}{3x} = \frac{7}{12} - \frac{1}{4x} - \frac{7}{x} \quad | \cdot 12x$$



$$\cancel{12x} \frac{1}{3} - \cancel{12x} \frac{(23-x)}{3x} = \cancel{12x} \cdot \frac{7}{12} - \cancel{12x} \cdot \frac{1}{4x} - \cancel{12x} \frac{7}{x}$$

$$4x - 4(23-x) = 7x - 3 - 12 \cdot 7$$

$$4x - 92 + 4x = 7x - 3 - 84$$

$$\underline{\quad} \quad 8x - 92 = 7x - 87 \quad | -7x$$

$$x - 92 = -87 \quad | +92$$

$$\underline{\underline{x = 5}}$$

PODMIENKY $x \neq 0$

$$\overset{\text{sk}}{L} = \frac{1}{3} - \frac{23-x}{3x} = \frac{1}{3} - \frac{23-5}{3 \cdot 5} = \frac{1}{3} - \frac{18}{15} =$$

$$= \frac{5}{15} - \frac{18}{15} = -\frac{13}{15} \checkmark$$

$$P = \frac{7}{12} - \frac{1}{4x} - \frac{7}{x} = \frac{7}{12} - \frac{1}{4 \cdot 5} - \frac{7}{5} =$$

$$= -\frac{1}{20} + \frac{7}{12} - \frac{7}{5} = \frac{-3 + 35 - 84}{60} = \frac{-87 + 35}{60} =$$

$$= -\frac{52}{60} = -\frac{13}{15} \checkmark$$

$$L = P$$

$$\frac{1+x}{x-1} - \frac{3+x}{x+1} = \frac{4}{x+1} \quad / (x-1)(x+1)$$



$$\cancel{(x-1)}(x+1) \frac{(1+x)}{\cancel{(x-1)}} - \cancel{(x-1)}(x+1) \frac{(3+x)}{\cancel{(x+1)}} = \cancel{(x-1)}(x+1) \frac{4}{\cancel{(x+1)}}$$

$$(x+1)(1+x) - (x-1)(3+x) = 4(x-1)$$

$$x^2 + 2x + 1 - (3x + x^2 - 3 - x) = 4x - 4$$

$$\underline{x^2 + 2x + 1} - \underline{3x - x^2 + 3 + x} = \underline{4x - 4}$$

$$4 = 4x - 4 \quad | +4$$

$$8 = 4x \quad | :4$$

$$\underline{\underline{x = 2}}$$

PODMIENIKY

$$x \neq \pm 1$$

SK

$$L = \frac{1+x}{x-1} - \frac{3+x}{x+1} = \frac{1+2}{2-1} - \frac{3+2}{2+1} =$$

$$= \frac{3}{1} - \frac{5}{3} = 3 - 1\frac{2}{3} = 1\frac{1}{3} \quad \checkmark$$

$$P = \frac{4}{x+1} = \frac{4}{2+1} = \frac{4}{3} = 1\frac{1}{3} \quad \checkmark$$

$$\checkmark = P$$

$$\frac{1}{x-3} + \frac{2}{x-4} = \frac{5}{(x-3)(x-4)}$$



$$\cancel{(x-3)}(x-4) \cdot \frac{1}{\cancel{x-3}} + \cancel{(x-3)}(x-4) \cdot \frac{2}{\cancel{(x-4)}} = \cancel{(x-3)}(x-4) \cdot \frac{5}{\cancel{(x-3)}(x-4)}$$

$$(x-4) + 2(x-3) = 5$$

$$x-4 + 2x-6 = 5$$

$$3x-10 = 5 \quad | +10$$

$$3x = 15 \quad | :3$$

$$\underline{\underline{x = 5}}$$

$$\overset{\text{sk}}{L} = \frac{1}{x-3} + \frac{2}{x-4} = \frac{1}{5-3} + \frac{2}{5-4} =$$

$$= \frac{1}{2} + \frac{2}{1} = 2\frac{1}{2} \quad \checkmark$$

$$P = \frac{5}{(x-3)(x-4)} = \frac{5}{(5-3)(5-4)} = \frac{5}{2 \cdot 1} = \frac{5}{2} = 2\frac{1}{2} \quad \checkmark$$

$$\underline{\underline{L = P}}$$

PODMIENIKY

$$x \neq 3$$

$$x \neq 4$$

$$\frac{3x-3}{3x+1} - \frac{x-1}{3x+1} = \frac{1}{4} \quad | \cdot (3x+1)$$



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$$\cancel{(3x+1)} \cdot \frac{(3x-3)}{\cancel{(3x+1)}} - \cancel{(3x+1)} \cdot \frac{(x-1)}{\cancel{(3x+1)}} = \cancel{(3x+1)} \cdot \frac{1}{4}$$

$$(3x-3) - (x-1) = \frac{3x+1}{4}$$

$$3x - 3 - x + 1 = \frac{3x+1}{4}$$

$$2x - 2 = \frac{3x+1}{4} \quad | \cdot 4$$

$$8x - 8 = 3x + 1 \quad | - 3x$$

$$5x - 8 = 1 \quad | + 8$$

$$5x = 9 \quad | : 5$$

$$x = \frac{9}{5}$$

Sk

$$L = \frac{3x-3}{3x+1} - \frac{x-1}{3x+1} = \frac{3 \cdot \frac{9}{5} - 3}{3 \cdot \frac{9}{5} + 1} - \frac{\frac{9}{5} - 1}{3 \cdot \frac{9}{5} + 1} =$$

$$= \frac{\frac{27}{5} - \frac{15}{5}}{\frac{27}{5} + \frac{5}{5}} - \frac{\frac{9}{5} - \frac{5}{5}}{\frac{27}{5} + \frac{5}{5}} = \frac{\frac{12}{5}}{\frac{32}{5}} - \frac{\frac{4}{5}}{\frac{32}{5}} =$$

$$= \frac{60}{160} - \frac{20}{160} = \frac{40}{160} = \frac{1}{4} \quad \checkmark$$

$$P = \frac{1}{4} \quad \checkmark$$

$$L = P$$

$$\frac{x+1}{x-2} - \frac{x-1}{x+2} = 0 \quad / (x-2)(x+2)$$



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$$\cancel{(x-2)}(x+2) \cdot \frac{(x+1)}{\cancel{(x-2)}} - \cancel{(x-2)}(x+2) \cdot \frac{(x-1)}{\cancel{x+2}} = \cancel{(x-2)}(x+2) \cdot 0$$

$$(x+2)(x+1) - (x-2)(x-1) = 0$$

$$x^2 + 2x + x + 2 - (x^2 - 2x - x + 2) = 0$$

$$x^2 + 3x + 2 - x^2 + 3x - 2 = 0$$

$$6x = 0 \quad | :6$$

$$x = 0$$

 ; PODMIENIKY:

$$x \neq \pm 2$$

Sk.

$$\tilde{L} = \frac{x+1}{x-2} - \frac{x-1}{x+2} = \frac{0+1}{0-2} - \frac{0-1}{0+2} =$$

$$= \frac{1}{-2} - \frac{-1}{2} = -\frac{1}{2} + \frac{1}{2} = 0 \quad \checkmark$$

$$P = 0 \quad \checkmark$$

$$\tilde{L} = P$$

$$\frac{1}{x} + \frac{1}{2x} + \frac{1}{3x} = 11 \quad | \cdot 6x$$



$$\overset{\textcircled{3}}{6x} \cdot \frac{1}{x} + \overset{\textcircled{2}}{6x} \cdot \frac{1}{2x} + \overset{\textcircled{1}}{6x} \cdot \frac{1}{3x} = 6x \cdot 11$$

$$6 + 3 + 2 = 66x$$

$$11 = 66x \quad | : 66$$

$$x = \frac{11}{66}$$

$$x = \frac{1}{6}$$

$$\underline{\underline{\frac{1}{6}}}$$

PODMIENIKY: $x \neq 0$

Sk.

$$L = \frac{1}{x} + \frac{1}{2x} + \frac{1}{3x} = \frac{1}{\frac{1}{6}} + \frac{1}{2 \cdot \frac{1}{6}} + \frac{1}{3 \cdot \frac{1}{6}} =$$

$$= \frac{\frac{1}{1}}{\frac{1}{6}} + \frac{\frac{1}{1}}{\frac{2}{6}} + \frac{\frac{1}{1}}{\frac{3}{6}} = \frac{6}{1} + \frac{6}{2} + \frac{6}{3} =$$

$$= 6 + 3 + 2 = 11 \quad \checkmark$$

$$P = 11 \quad \checkmark$$

$$L = P$$

$$\frac{1}{x+6} = \frac{3}{5x-2} \quad / \cdot (x+6) \cdot (5x-2)$$



$$\cancel{(x+6)} \cdot \cancel{(5x-2)} \cdot \frac{1}{\cancel{(x+6)}} = (x+6) \cancel{(5x-2)} \cdot \frac{3}{\cancel{(5x-2)}}$$

$$5x-2 = 3(x+6)$$

$$5x-2 = 3x+18 \quad | -3x$$

$$2x-2 = 18 \quad | +2$$

$$2x = 20 \quad | :2$$

$$x = 10$$

PODMIENKIY: $x \neq -6$
 $x \neq -\frac{2}{5}$

$$\begin{aligned} 5x-2 &= 0 \\ 5x &= 2 \\ x &= \frac{2}{5} \end{aligned}$$

Sk.

$$L = \frac{1}{x+6} = \frac{1}{10+6} = \frac{1}{16} \quad \checkmark$$

$$P = \frac{3}{5x-2} = \frac{3}{5 \cdot 10 - 2} = \frac{3}{50-2} = \frac{3}{48} = \frac{1}{16} \quad \checkmark$$

$$\underline{L=P}$$

$$\frac{x+7}{x-5} + \frac{x+5}{x-4} = 2 \quad / \cdot (x-5)(x-4)$$



$$\cancel{(x-5)}(x-4) \frac{(x+7)}{\cancel{(x-5)}} + \cancel{(x-5)}(x-4) \frac{(x+5)}{\cancel{(x-4)}} = 2 \cdot (x-5)(x-4)$$

$$(x-4)(x+7) + (x-5)(x+5) = 2(x^2 - 7x - 5x + 35)$$

$$x^2 - 49 + x^2 - 25 = 2(x^2 - 12x + 35)$$

$$\cancel{2x^2} - 74 = \cancel{2x^2} - 24x + 70 \quad / -2x^2$$

$$-74 = -24x + 70 \quad / -70$$

$$-144 = -24x \quad / \cdot (-24)$$

$$\underline{\underline{x = 6}}$$

PODMIENKI: $x \neq 5, x \neq 4$

$$\text{SK} \quad \tilde{L} = \frac{x+7}{x-5} + \frac{x+5}{x-4} = \frac{6+7}{6-5} + \frac{6+5}{6-4} =$$

$$= \frac{13}{1} + \frac{11}{-2} = 13 - 11 = 2 \quad \checkmark$$

$$P = 2 \quad \checkmark$$

$$\tilde{L} = P$$

$$\frac{x-2}{x} - \frac{x}{x-2} = \frac{1}{x(x-2)} \quad / \cdot x \cdot (x-2)$$



$$\cancel{x} \cdot (x-2) \cdot \frac{(x-2)}{\cancel{x}} - \frac{x \cdot \cancel{(x-2)} \cdot x}{\cancel{(x-2)}} = \cancel{x} \cdot \cancel{(x-2)} \cdot \frac{1}{\cancel{x(x-2)}}$$

$$(x-2)(x-2) - x^2 = 1$$

$$x^2 - 2x - 2x + 4 - x^2 = 1$$

$$-4x + 4 = 1 \quad | -4$$

$$-4x = -3 \quad | : (-4)$$

$$x = \frac{3}{4}$$

PODHĚNKY:

$$x \neq 0$$

$$x \neq 2$$

$$L = \frac{x-2}{x} - \frac{x}{x-2} = \frac{\frac{3}{4}-2}{\frac{3}{4}} - \frac{\frac{3}{4}}{\frac{3}{4}-2} =$$

$$= \frac{\frac{3}{4} - \frac{8}{4}}{\frac{3}{4}} - \frac{\frac{3}{4}}{\frac{3}{4} - \frac{8}{4}} = \frac{-\frac{5}{4}}{\frac{3}{4}} - \frac{\frac{3}{4}}{-\frac{5}{4}} =$$

$$= -\frac{20}{12} + \frac{12}{20} = -\frac{10}{6} + \frac{6}{10} = \frac{-50+18}{30} =$$

$$= -\frac{32}{30} = -\frac{16}{15} \quad \checkmark$$

$$P = \frac{1}{x(x-2)} = \frac{1}{\frac{3}{4} \cdot (\frac{3}{4}-2)} = \frac{1}{\frac{3}{4} \cdot (-\frac{5}{4})} = -\frac{1}{\frac{15}{16}} = -\frac{16}{15} \quad \checkmark$$

$$L = P$$

$$\frac{7}{x} + 1\frac{1}{2} = \frac{4}{x} + 1\frac{2}{3}$$



$$\frac{7}{x} + \frac{3}{2} = \frac{4}{x} + \frac{5}{3} \quad | \cdot 6x$$

$$\overset{\textcircled{1}}{6x} \cdot \frac{7}{\overset{\textcircled{1}}{x}} + \overset{\textcircled{3x}}{6x} \cdot \frac{3}{2} = \overset{\textcircled{1}}{6x} \cdot \frac{4}{\overset{\textcircled{1}}{x}} + \overset{\textcircled{2x}}{6x} \cdot \frac{5}{3}$$

$$6 \cdot 7 + 3x \cdot 3 = 6 \cdot 4 + 2x \cdot 5$$

$$42 + 9x = 24 + 10x \quad | -9x$$

$$42 = 24 + x \quad | -24$$

$$\underline{\underline{x = 18}}$$

PODMIENKIY : $x \neq 0$

$$\text{Sk: } L = \frac{7}{x} + 1\frac{1}{2} = \frac{7}{18} + 1\frac{1}{2} =$$

$$= \frac{7}{18} + \frac{3}{2} = \frac{7}{18} + \frac{24}{18} = \frac{34}{18} = \frac{17}{9} \checkmark$$

$$P = \frac{4}{x} + 1\frac{2}{3} = \frac{4}{18} + \frac{5}{3} = \frac{4}{18} + \frac{30}{18} = \frac{34}{18} =$$

$$= \frac{17}{9} \checkmark$$

$$L = P$$

$$\frac{4}{x+1} - 4 = \frac{12-7x}{x-1} / (x+1)(x-1)$$



$$\cancel{(x+1)}\cancel{(x-1)} \cdot \frac{4}{\cancel{x+1}} - 4 \cdot \cancel{(x+1)}\cancel{(x-1)} = \cancel{(x+1)}\cancel{(x-1)} \frac{(12-7x)}{\cancel{(x-1)}}$$

$$4(x-1) - 4(x^2-1) = (x+1)(12-7x)$$

$$4x - 4 - 4x^2 + 4 = 12x - 7x^2 + 12 - 7x$$

$$-7x^2 + 4x + 3 = -7x^2 + 5x + 12 \quad / +7x^2$$

$$4x - 3 = 5x + 12 \quad / -4x$$

$$-3 = x + 12 \quad / -12$$

$$x = -9$$

PODMIENIKY $x \neq \pm 1$

SK.

$$L = \frac{4}{x+1} - 4 = \frac{4}{-9+1} - 4 = \frac{4}{-8} - 4 = -\frac{1}{2} - 4 = -4\frac{1}{2} \checkmark$$

$$P = \frac{12-7x}{x-1} = \frac{12-7 \cdot (-9)}{-9-1} = \frac{12+63}{-10} =$$

$$= \frac{75}{-10} = -\frac{75}{10} = -7\frac{5}{10} = -7\frac{1}{2} \checkmark$$

$$L = P$$

$$\frac{2x+5}{6} + \frac{10}{x-3} = \frac{2x-3}{6} \quad | \cdot 6 \cdot (x-3)$$



$$\cancel{6} \cdot (x-3) \frac{(2x+5)}{\cancel{6}} + \cancel{6} \cdot \cancel{(x-3)} \cdot \frac{10}{\cancel{(x-3)}} = \cancel{6} \cdot (x-3) \frac{(2x-3)}{\cancel{6}}$$

$$(x-3)(2x+5) + 6 \cdot 10 = (x-3)(2x-3)$$

$$2x^2 + 5x - 6x - 15 + 60 = 2x^2 - 3x - 6x + 9$$

$$2x^2 - x + 45 = 2x^2 - 9x + 9 \quad | -2x^2$$

$$-x + 45 = -9x + 9 \quad | +9x$$

$$8x + 45 = 9 \quad | -45$$

$$8x = -36 \quad | : 8$$

$$x = -\frac{36}{8} = -\frac{9}{2} \quad \text{PODMENKY}$$

$$x \neq 3$$

SK

$$L = \frac{2x+5}{6} + \frac{10}{x-3} = \frac{2 \cdot \left(-\frac{9}{2}\right) + 5}{6} + \frac{10}{-\frac{9}{2} - 3} =$$

$$= \frac{-9+5}{6} + \frac{10}{-\frac{9}{2} - \frac{6}{2}} = \frac{-4}{6} + \frac{10}{-\frac{15}{2}} =$$

$$= -\frac{2}{3} - \frac{1 \cdot \frac{10}{15}}{\frac{1}{2}} = -\frac{2}{3} - \frac{20}{15} = -\frac{2}{3} - \frac{4}{3} = -\frac{6}{3} = -2 \checkmark$$

$$P = \frac{2x-3}{6} = \frac{2 \cdot \left(-\frac{9}{2}\right) - 3}{6} = \frac{-9-3}{6} =$$

$$= -\frac{12}{6} = -2 \checkmark$$

$$L = P$$

$$\frac{x+3}{4} - \frac{3}{x+3} = \frac{2x-3}{8} \quad | \cdot 8(x+3)$$



$$\textcircled{2} \quad \cancel{8(x+3)} \left(\frac{x+3}{4} - \cancel{8 \cdot (x+3)} \right) \frac{3}{\cancel{(x+3)}} = \cancel{8 \cdot (x+3)} \cdot \frac{(2x-3)}{\cancel{8}}$$

$$2(x+3)(x+3) - 8 \cdot 3 = (x+3)(2x-3)$$

$$2(x^2 + 3x + 3x + 9) - 24 = 2x^2 - 3x + 6x - 9$$

$$2x^2 + 6x + 6x + 18 - 24 = 2x^2 + 3x - 9$$

$$2x^2 + 12x - 6 = 2x^2 + 3x - 9 \quad | -2x^2$$

$$12x - 6 = 3x - 9 \quad | -3x$$

$$9x - 6 = -9 \quad | +6$$

$$9x = -3 \quad | :9$$

$$x = -\frac{1}{3}$$

PODNIKNIČKY
 $x \neq -3$

$$\text{SK } L = \frac{x+3}{4} - \frac{3}{x+3} = \frac{-\frac{1}{3} + \frac{9}{3}}{4} - \frac{3}{-\frac{1}{3} + \frac{9}{3}} =$$

$$= \frac{\frac{8}{3}}{\frac{4}{1}} - \frac{\frac{3}{1}}{\frac{8}{3}} = \frac{8}{12} - \frac{9}{8} = \frac{16}{24} - \frac{27}{24} =$$

$$= -\frac{11}{24} \quad \checkmark$$

$$P = \frac{2x-3}{8} = \frac{2 \cdot (-\frac{1}{3}) - \frac{9}{3}}{8} = \frac{-\frac{2}{3} - \frac{9}{3}}{8} =$$

$$= -\frac{\frac{11}{3}}{\frac{8}{1}} = -\frac{11}{24} \quad \checkmark \quad L = P$$

$$\frac{3}{(x-4)(x+1)} = \frac{4}{(x-5)(x+1)} \quad / (x-5)(x-4)(x+1)$$



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$$(x-5)(x-4)(x+1) \cdot \frac{3}{(x-4)(x+1)} = (x-5)(x-4)(x+1) \frac{4}{(x-5)(x+1)}$$

$$(x-5) \cdot 3 = 4 \cdot (x-4)$$

$$3x - 15 = 4x - 16 \quad / -4x$$

$$-x - 15 = -16 \quad / +15$$

$$-x = -1 \quad | :(-1)$$

$$\underline{\underline{x = 1}}$$

SK.

$$L = \frac{3}{(x-4)(x+1)} = \frac{3}{(1-4)(1+1)} = \frac{3}{-3 \cdot 2} =$$

$$= -\frac{1}{2} \checkmark$$

$$P = \frac{4}{(x-5)(x+1)} = \frac{4}{(1-5)(1+1)} = \frac{4}{-4 \cdot 2} = -\frac{1}{2} \checkmark$$

$$L = P$$

PODMIENIKY

- $x \neq 5$
- $x \neq 4$
- $x \neq -1$

$$\frac{x+7}{x-2} - \frac{x-2}{x+2} = -\frac{3}{x^2-4} \quad | \cdot (x^2-4) \quad \boxed{\frac{1}{x}} \quad \textcircled{19}$$

$$\cancel{(x+2)} \cdot \frac{(x+4)}{\cancel{x-2}} - \cancel{(x^2-4)} \cdot \frac{(x-2)}{\cancel{(x+2)}} = -\cancel{(x^2-4)} \cdot \frac{3}{\cancel{(x^2-4)}}$$

$$(x+2)(x+4) - (x-2)(x-2) = -3$$

$$x^2 + 4x + 2x + 14 - (x^2 - 4x + 4) = -3$$

$$x^2 + 4x + 2x + 14 - x^2 + 4x - 4 = -3$$

$$13x + 10 = -3 \quad | -10$$

$$13x = -13 \quad | :13$$

$$x = -1$$

SK.

$$L = \frac{x+4}{x-2} - \frac{x-2}{x+2} = \frac{-1+4}{-1-2} - \frac{-1-2}{-1+2} =$$

$$= \frac{6}{-3} - \frac{-3}{1} = -2 + 3 = 1 \quad \checkmark$$

$$P = -\frac{3}{x^2-4} = -\frac{3}{(-1)^2-4} = -\frac{3}{1-4} = -\frac{3}{-3} = 1$$

$$\underline{\underline{L=P}}$$

PODMIENKY

$$x \neq 2$$

$$x \neq -2$$

$$\frac{x+1}{2x-3} - \frac{7}{4x^2-9} = -\frac{4-x}{2x+3} \quad | \cdot (4x^2-9)$$

$$\frac{1}{x}$$

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$$\frac{(4x^2-9)}{(2x+3)} \frac{(x+1)}{2x-3} - \frac{(4x^2-9)}{4x^2-9} \cdot 7 = - \frac{(4x^2-9)}{(2x+3)} \frac{(4-x)}{(2x-3)}$$

$$(2x+3)(x+1) - 7 = - (2x-3)(4-x)$$

$$2x^2 + 2x + 3x + 3 - 7 = - (8x - 2x^2 - 12 + 3x)$$

$$2x^2 + 5x - 4 = -8x + 2x^2 + 12 - 3x$$

$$2x^2 + 5x - 4 = 2x^2 - 11x + 12 \quad | -2x^2$$

$$5x - 4 = -11x + 12 \quad | +11x$$

$$16x - 4 = 12 \quad | +4$$

$$16x = 16 \quad | :16$$

$$\underline{\underline{x = 1}}$$

sk.

$$L = \frac{x+1}{2x-3} - \frac{7}{4x^2-9} = \frac{1+1}{2 \cdot 1 - 3} - \frac{7}{4(1)^2 - 9} =$$

$$= \frac{2}{2-3} - \frac{7}{4-9} = \frac{2}{-1} - \frac{7}{-5} = -2 + \frac{7}{5} =$$

$$= -\frac{10}{5} + \frac{7}{5} = -\frac{3}{5} \checkmark$$

$$P = -\frac{4-x}{2x+3} = -\frac{4-1}{2 \cdot 1 + 3} = -\frac{3}{2+3} = -\frac{3}{5} \checkmark$$

$$L = P$$

PODMIENKY

$$2x-3=0$$

$$2x=3$$

$$x = \frac{3}{2} \Rightarrow$$

$$x \neq \pm \frac{3}{2}$$