

Složené lomené výrazy

1) Zjednoduř:

$$a) \frac{\frac{1}{n} + \frac{1}{m}}{\frac{1}{mn}} =$$

$$b) \frac{\frac{6u^2}{5v^3}}{4u^2v} =$$

$$c) \frac{\frac{ax+ay}{xy}}{\frac{x+y}{x}} =$$

$$d) \frac{\frac{a+b}{a-b}}{a^2+2ab+b^2} =$$

$$e) \frac{x+y}{x - \frac{y^2}{x}} =$$

$$f) \frac{\frac{2r+2s}{3r-3s}}{\frac{6r+6s}{r^2-rs}} =$$

2) Zjednoduř:

$$a) \frac{\frac{a}{a^2-4}}{\frac{a+2}{a^2}} =$$

$$b) \frac{z - \frac{4}{z}}{z+2} =$$

$$c) \frac{\frac{1}{p} + \frac{1}{q}}{\frac{p+q}{pq}} =$$

$$d) \frac{\frac{1+h}{2k}}{\frac{h^2-1}{5k}} =$$

$$e) \frac{\frac{u^2-v^2}{(u+v)^2}}{\frac{4u-4v}{3(u+v)}} =$$

$$f) \frac{1 + \frac{m}{n}}{n - \frac{m^2}{n}} =$$

3) Zjednoduř:

$$a) \frac{\frac{a+b}{a-b}}{\frac{(a+b)^2}{a^2-b^2}} =$$

$$b) \frac{\frac{1}{x} + \frac{1}{y}}{\frac{1}{x} - \frac{1}{y}} =$$

$$c) \frac{\frac{2}{m} + \frac{2}{n}}{\frac{m+n}{mn}} =$$

$$d) \frac{1 + \frac{b}{a}}{1 - \frac{b}{a}} =$$

$$e) \frac{1 + \frac{y}{x}}{1 - \left(\frac{y}{x}\right)^2} =$$

$$f) \frac{\frac{a}{b} - 2 + \frac{b}{a}}{\frac{1}{b} - \frac{1}{a}} =$$

4) Zjednoduř:

$$\begin{array}{llll} a) \frac{\frac{1}{z} - \frac{z}{9}}{\frac{3+z}{3z}} = & b) \frac{\frac{1+a}{1-a} - \frac{1-a}{1+a}}{\frac{1-a}{1+a} + \frac{1+a}{1-a}} = & c) \frac{\frac{a+2}{a^2}}{\frac{1}{a} - \frac{4}{a^3}} = & d) \frac{\frac{n}{4} - 1 + \frac{3}{4n}}{\frac{n}{2} - \frac{6}{n} + 0,5} = \\ e) \frac{1 - \frac{u-v}{u+v}}{1 + \frac{u+v}{u-v}} = & f) \frac{\frac{x}{4} - 1 + \frac{1}{x}}{\frac{x+2}{x} \cdot \frac{x-2}{4}} = \end{array}$$

5) Zjednoduř:

$$a) \frac{1 - \frac{2b}{a} + \frac{b^2}{a^2}}{\frac{a-b}{a^3}} = \quad b) 1 - \frac{t}{1 - \frac{t}{t+1}} =$$

Výsledky

1) a) $m+n$; $m, n \neq 0$; b) $\frac{3}{10v^4}$; $u, v \neq 0$; c) $\frac{a}{y}$; $x, y \neq 0$; $x \neq -y$;
d) $\frac{1}{a^2 - b^2}$; $a \neq \pm b$; e) $\frac{x}{x-y}$; $x \neq \pm y$; f) $\frac{r}{9}$; $r \neq \pm 9$;

2) a) $\frac{1}{a(a-2)}$; $a \neq 0$; $a \neq \pm 2$; b) $\frac{z-2}{z}$; $z \neq 0$; $z \neq -2$; c) 1; $p, q \neq 0$; $p \neq -q$;
d) $\frac{5}{2(h-1)}$; $k \neq 0$; $h \neq \pm 1$; e) $\frac{3}{4}$; $u \neq \pm v$; f) $\frac{1}{n-m}$; $n \neq 0$; $m \neq \pm n$;

3) a) 1; $a \neq \pm b$; b) $\frac{y+x}{y-x}$; $x, y \neq 0$; $x \neq y$;
c) 2; $m, n \neq 0$; $m \neq -n$; d) $\frac{a+b}{a-b}$; $a \neq 0$; $a \neq b$;
e) $\frac{x}{x-y}$; $x \neq 0$; $x \neq \pm y$; f) $a-b$; $a, b \neq 0$; $a \neq b$;