

Exericka:

a) $x \cdot y = 0 \dots x=0; y=0$

b) $(x-2)(x+3)=0 \dots x=2; x=-3 \rightarrow$ podmínky: $x \neq 3; x \neq -4; x \neq 4$

c) $(a-b)(a+b)=0 \dots$ ~~$a=b$~~ ; ~~$a=-b$~~ \rightarrow podmínky: $(a-b)^2 \neq 0 \Rightarrow$ $a+b$ \rightarrow *skládej jeden z výsledků*

d) $(10b-15)(b+2)=0$

$10(b-1)(b+2)=0 \dots b=1; b=-2 \rightarrow$ podmínky: $6b^3 - 24b \neq 0$

$6b(b^2-4) \neq 0$

$6b(b-2)(b+2) \neq 0$

$b \neq 0; b \neq 2;$ $b \neq -2$

106 | 2

a) $\frac{3}{10x} = \frac{3 \cdot 1,5}{10x \cdot 1,5} = \frac{4,5x}{15}$

b) $\frac{y-3}{y-4} = \frac{y-3}{y-4} \cdot \frac{y+4}{y+4} = \frac{y^2+y-3y-12}{y^2-16} = \frac{y^2+y-12}{y^2-16}$

c) $\frac{a-1}{1-a} = \frac{(a-1) \cdot (-1)}{(1-a) \cdot (-1)} = \frac{(1-a)}{a-1}$

d) $\frac{m-n}{m+n} = \frac{(m-n)(m+n)}{(m+n)(m+n)} = \frac{m^2-n^2}{(m+n)^2}$

e) $\frac{n}{n+1} = \frac{n \cdot n}{n(n+1)} = \frac{n^2}{n(n+1)}$

f) $\frac{k-2}{k-3} = \frac{(k-2)(k-3)}{(k-3) \cdot (k-3)} = \frac{k^2-2k-3k+6}{(k^2-6k+9)} = \frac{k^2-5k+6}{k^2-6k+9}$

104 | 3

a) $\frac{8n}{10n^3q} = \frac{\cancel{2} \cdot 4n}{\cancel{2} \cdot 5n^3nq} = \frac{4}{5n^2q}$ $n \neq 0; q \neq 0$

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

c) $\frac{4y^2-4}{y^2-1} = \frac{4(\cancel{y^2-1})}{\cancel{y^2-1}} = 4$ $y^2-1 \neq 0$
 $(y-1)(y+1) \neq 0$
 $y \neq 1; y \neq -1$

d) $\frac{k^2+2k+1}{2k+2} = \frac{(k+1)^2}{2(k+1)} = \frac{(k+1)\cancel{(k+1)}}{2\cancel{(k+1)}} = \frac{k+1}{2}$ $k \neq -1$



$$e) \frac{2(x+5)}{2x^2-50} = \frac{2(x+5)}{2(x^2-25)} = \frac{\cancel{2(x+5)}}{\cancel{2}(x-5)(x+5)} = \frac{1}{x-5}$$

$$x \neq -5 \\ x \neq 5$$

* → DOBROVOLNÝ

$$d) \frac{4m^2 + 3mn - 4m - 3n}{4mn + 3n^2 - 4m - 3n} = \frac{4m^2 - 4m + 3mn - 3n}{4mn - 4m + 3n^2 - 3n} = \frac{4m(m-1) + 3n(m-1)}{4m(n-1) + 3n(n-1)} =$$

$$= \frac{(m-1)(\cancel{4m+3n})}{(n-1)(\cancel{4m+3n})} = \boxed{\frac{m-1}{n-1}}$$

$$\boxed{n \neq 1}, 4m + 3n \neq 0$$

$$4m \neq -3n$$

$$\boxed{m \neq -\frac{3n}{4}}$$