

Rovnice:

a) $(x-3)(x^2-16) = (x-3)(x-4)(x+4)$

$$\begin{array}{|l} x \neq 3 \\ x \neq -4 \\ x \neq 4 \end{array}$$

c) $6b^3 - 24b = 6b(b^2-4) = 6b(b-2)(b+2)$

$$\begin{array}{|l} b \neq 0 \\ b \neq -2 \\ b \neq 2 \end{array}$$

b) $a^2 - 2ab + b^2 = (a-b)^2$

$$(a-b)^2 \neq 0$$

$$a-b \neq 0$$

$$a \neq b$$

Problémy k procvičování:

a) $12x^2y^3 = 2 \cdot 2 \cdot 3 \cdot xxyyy$
 $18x^2y^4z = 2 \cdot 3 \cdot 3 \cdot xxyyyyk$

D: $2 \cdot 3 \cdot xxyyy = 6x^2y^3$

M: $2 \cdot 2 \cdot 3 \cdot 3 \cdot xxyyyyk = 36x^2y^4k$

b) $3x^2 + 6xy + 3y^2 = 3(x^2 + 2xy + y^2) = 3(x+y)(x+y)$

$$6x + 6y = 6(x+y) = 2 \cdot 3 \cdot (x+y)$$

D: $3(x+y)$

M: $6(x+y)^2$

c) $14a^2b^3c^2 = 2 \cdot 7 \cdot aabbbccc$

$$21a^3b^2c = 3 \cdot 7 \cdot aaaabbc$$

D: $4a^2b^2c$

M: $2 \cdot 3 \cdot 7 \cdot aabbbccc = 42a^3b^3c^2$

d) $15y + 9 = 3(5y + 3)$

$$25y^2 + 30y + 9 = (5y + 3)^2 = (5y + 3)(5y + 3)$$

D: $5y + 3$

M: $3(5y + 3)^2$

e) $x^2y(x-y)(x+y)^2 = xxyy(x-y)(x+y)(x+y)$

$$xy^2(x-y)^2(x+y) = xyxy(x-y)(x-y)(x+y)$$

D: $xy(x-y)(x+y)$

M: $x^2y^2(x+y)^2(x-y)^2$

f) $6(a-b)(a^2-b^2) = 2 \cdot 3 \cdot (a-b)(a-b)(a+b)$

$$24(a+b)(a^2+b^2)a = 3 \cdot 3 \cdot 3 \cdot (a+b)(a^2+b^2) \cdot a$$

D: $3(a+b)$

M: $2 \cdot 3 \cdot 3 \cdot 3 \cdot (a-b)(a-b)(a+b)(a^2+b^2) \cdot a = 54(a-b)^2(a+b)(a^2+b^2) \cdot a$