

I.

Doplňte tabulku, všechny úlohy řešte v R

| | | |
|---|--|--|
| a) $3x^2 - 4 = 0$ | $3x^2 - 4 = 0$ $3x^2 = 4$ $x^2 = \frac{4}{3} \Rightarrow x = \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$ | $P = \left\{ -\frac{2\sqrt{3}}{3}, \frac{2\sqrt{3}}{3} \right\}$ |
| b) $6x^2 - 12x = 0$ | $6x^2 - 12x = 0$ $6x \cdot (x - 2) = 0 \Rightarrow x_1 = 0, x_2 = 2$ | $P = \{0, 2\}$ |
| c) $x^2 + 4 = 0$ | $x^2 + 4 = 0$ $x^2 = -4$ | $P = \emptyset$ |
| d) $2x^2 + 9x - 5 = 0$ | $2x^2 + 9x - 5 = 0$ $a = 2, b = 9, c = -5$ $D = b^2 - 4ac = 81 + 40 = 121$ $x_{1,2} = \frac{-9 \pm \sqrt{121}}{4} = \frac{-9 \pm 11}{4}$ $x_1 = \frac{1}{2}, x_2 = -5$ | $P = \left\{ \frac{1}{2}, -5 \right\}$ |
| e) $\frac{x+3}{x-3} + \frac{x-6}{x+6} = 2\frac{1}{5}$ | $\frac{x+3}{x-3} + \frac{x-6}{x+6} = 2\frac{1}{5} \quad x \neq 3 \wedge x \neq -6$ $(x+3) \cdot (x+6) + (x-3) \cdot (x-6) = \frac{11}{5} \cdot (x-3) \cdot (x+6)$ $5 \cdot (x^2 + 9x + 18 + x^2 - 9x + 18) = 11x^2 + 33x - 198$ $-x^2 - 33x + 378 = 0$ $D = 2601$ $x_{1,2} = \frac{33 \pm 51}{-2} \Rightarrow x_1 = -42, x_2 = 9$ | $P = \{-42, 9\}$ |

[Zpět:](#)