

4. Soustavy lineárních nerovnic

Řešte soustavy nerovnic v R:

$$1) \quad \frac{7-x}{2} - 3 < \frac{3+4x}{5} - 4$$

$$\frac{5}{3}x + 5 \cdot (4-x) < 2 \cdot (4-x)$$

$$[P = (9, \infty)]$$

$$2) \quad 3x + 1 \geq x - \frac{9}{2}$$

$$(x-3)^2 < x \cdot (x+2) + 3$$

$$P = \left(\frac{3}{4}, \infty \right)$$

$$3) \quad 2 \cdot (2x-3) < 5x - 0,75$$

$$8x - 5 < \frac{1}{2} \cdot (15x - 8)$$

$$P = \left(-5,25; 2 \right)$$

$$4) \quad \frac{4x+1}{3} + \frac{2x-1}{2} - 6x \leq 3x - 1$$

$$x - 3 \cdot (2x-1) > x + 27$$

$$P = \emptyset$$

Řešte nerovnice v R:

$$1) \quad (x-3) \cdot (x+1) > 0$$

$$P = (-\infty, -1) \cup (3, \infty)$$

$$2) \quad (2x-3) \cdot (5-3x) > 0$$

$$P = \left(\frac{3}{2}, \frac{5}{3} \right)$$

$$3) \quad \frac{9-2x}{5-4x} \leq 0$$

$$P = \left(\frac{5}{4}, \frac{9}{2} \right]$$

$$4) \quad \frac{14-x}{x-5} > 0$$

$$P = (5, 14)$$

$$5) \quad \frac{3-4y}{2y-3} < 0$$

$$P = \left(-\infty, \frac{3}{4} \right) \cup \left(\frac{3}{2}, \infty \right)$$