

PRVA DOMAČA NALOGA

Analiza 1 (F)

(1) Reši naslednje enačbe:

(a) $x + \frac{x+2}{\sqrt{x+1}} = 2,$

(b) $\sqrt{x^2 - 5x + 5} = \sqrt{x - 3},$

(c) $|x + 1| + |x - 1| = 2.$

(2) Reši naslednje neenačbe:

(a) $|2|x| - 5| \leq 1,$

(b) $|3x + 2| > 4|x - 1|,$

(c) $|\frac{x+4}{3x+2}| > \frac{1}{x},$

(d) $\frac{1}{x} + \frac{1}{x+1} < \frac{2}{x+2},$

(e) $|x^2 + 2x - 8| < |x - 6|,$

(f) $\frac{1+|x-1|}{1-|x-1|} \leq 1,$

(g) $\frac{x}{x-5} - \frac{1}{x+4} \leq \frac{x^2+x+7}{x^2-x-20}.$

(3) Nariši naslednje množice točk v ravnini:

(a) $A = \{(x, y) \in \mathbb{R}^2 ; 2^x - 1 \leq 4 - 3^x, |x + 1| < 1\},$

(b) $B = \{(x, y) \in \mathbb{R}^2 ; x > \arctg(y - 2), 2\pi y + 4x \geq \pi, x < 2\},$

(c) $C = \{(x, y) \in \mathbb{R}^2 ; |x| < |y|, y \leq |1 - x^2|\}.$