

1. Reši enačbo  $\frac{x+1}{2} - 2x = 2$  / 2

$$\cancel{2}(x+1) - 4x = 4$$

$$\cancel{2}x + 1 - 4x = 4$$

$$-3x + 1 = 4 \quad / -1$$

$$-3x = 3 \quad / : (-3)$$

$$x = -1$$

$$R = \{-1\}$$

2. Reši enačbo  $\frac{2x}{3} + \frac{5}{6} = \frac{x}{6} + \frac{1}{3}$  / 6 in napravi preizkus.

$$\frac{6 \cdot 2x}{3} + \frac{6 \cdot 5}{6} = \frac{6 \cdot x}{6} + \frac{6}{3}$$

$$2 \cdot 2x + 5 = x + 2$$

$$4x + 5 = x + 2 \quad / -x, -5$$

$$3x = -3 \quad / : 3$$

$$x = -1$$

$$R = \{-1\}$$

PREIZKUS:

$$\frac{2 \cdot (-1)}{3} + \frac{5}{6} = \frac{-1}{6} + \frac{1}{3}$$

$$\frac{-2}{3} + \frac{5}{6} = \frac{-1}{6} + \frac{1}{3}$$

$$\frac{-4}{6} + \frac{5}{6} = \frac{-1}{6} + \frac{2}{6}$$

$$\frac{1}{6} = \frac{1}{6} \quad \checkmark$$

$$L = D$$

3. Reši enačbo  $(x+1)^2 + 9 = 3x(x+2) - (2x+4)(x-5)$ .

$$x^2 + 2x + 1 + 9 = 3x^2 + 6x - (2x^2 - 10x + 4x - 20)$$

$$x^2 + 2x + 10 = 3x^2 + 6x - 2x^2 + 10x - 4x + 20$$

$$\cancel{x^2} + 2x + 10 = \cancel{x^2} + 12x + 20$$

$$2x + 10 = 12x + 20 \quad / -12x, -10$$

$$-10x = 10 \quad / : (-10)$$

$$x = -1$$

$$R = \{-1\}$$

4. Reši algebrsko enačbo  $\frac{x^2+9}{x^2-9} = \frac{x}{x-3}$ .

$$/ : (x+3)(x-3)$$

1. pogoj  $x^2 - 9 \neq 0$   
 $(x+3)(x-3) \neq 0$   
 $x \neq -3 \quad x \neq 3$

$$\frac{(x^2+9)(x+3)(x-3)}{(x+3)(x-3)} = \frac{x \cdot (x+3)(x-3)}{(x-3)}$$

$$x^2 + 9 = x^2 + 3x \quad / -$$

$$9 = 3x$$

$$x = 3$$

x ne sme biti 3

TOREJ  $R = \emptyset$

Neresljiva enačba

5. Reši enačbo  $2x - 3 = 6 - x$ . / +x, +3

$$3x = 9 \quad | :3$$

$$x = 3$$

$$R = \{3\}$$

6. Reši enačbo  $3(x - 3) = 2x - (9 - 7x)$ , naredi tudi preizkus.

$$3x - 9 = 2x - 9 + 7x$$

$$3x - 9 = 9x - 9 \quad | -9x, +9$$

$$-6x = 0 \quad | :(-6)$$

$$x = 0$$

$$R = \{0\}$$

PREIZKUS

$$3 \cdot (0 - 3) = 2 \cdot 0 - (9 - 7 \cdot 0)$$

$$3 \cdot (-3) = -9$$

$$-9 = -9 \quad \checkmark$$

$$L = D$$

7. Reši enačbo  $\frac{x-4}{2} = \frac{x+3}{3}$ . / ·6

$$3 \cdot \frac{6(x-4)}{2} = \frac{6(x+3)}{3}$$

$$3(x-4) = 2x + 6$$

$$3x - 12 = 2x + 6 \quad | -2x, +12$$

$$x = 18$$

$$R = \{18\}$$

8. Reši enačbo  $(x - 3)^2 - (2x + 1)^2 = (x + 3)^2 - (2x + 5)^2$ .

$$x^2 - 6x + 9 - (4x^2 + 4x + 1) = x^2 + 6x + 9 - (4x^2 + 20x + 25)$$

$$\underline{x^2} - \underline{6x} + \underline{9} - \underline{4x^2} - \underline{4x} - \underline{1} = \underline{x^2} + \underline{6x} + \underline{9} - \underline{4x^2} - \underline{20x} - \underline{25}$$

$$\rightarrow -10x + 8 = -14x - 16 \quad | +14x, -8$$

$$4x = -24 \quad | :4$$

$$x = \underline{\underline{-6}}$$

$$R = \{-6\}$$