

# Domaća zadaća

## SKUPOVI BROJEVA

1. Kojem skupu primarno pripadaju sljedeći brojevi : 5, -3, -4.5, -5.7777...,  $\frac{3}{10}$ ,  $\sqrt{10}$ ,

$$7.89, 100.3333..., \frac{5}{999}, \frac{0}{12}, 0, -\frac{7}{3}, \pi$$

$$5 \in \mathbb{N}, -3 \in \mathbb{Z}, -4.5 \in \mathbb{Q}, -5.\dot{7} \in \mathbb{Q}, \frac{3}{10} \in \mathbb{Q}, \sqrt{10} \in \mathbb{R}, 7.89 \in \mathbb{Q}, 100.\dot{3} \in \mathbb{Q}, \frac{0}{12} \in \mathbb{Z}, 0 \in \mathbb{Z},$$

$$\frac{7}{3} \in \mathbb{Q}, \pi \in \mathbb{R}$$

2. Odredi a)  $D(300, 450, 315) = 5 \cdot 3 = 15$

$$b) V(126, 735) = 3 \cdot 3 \cdot 2 \cdot 7 \cdot 7 \cdot 5 = 4410$$

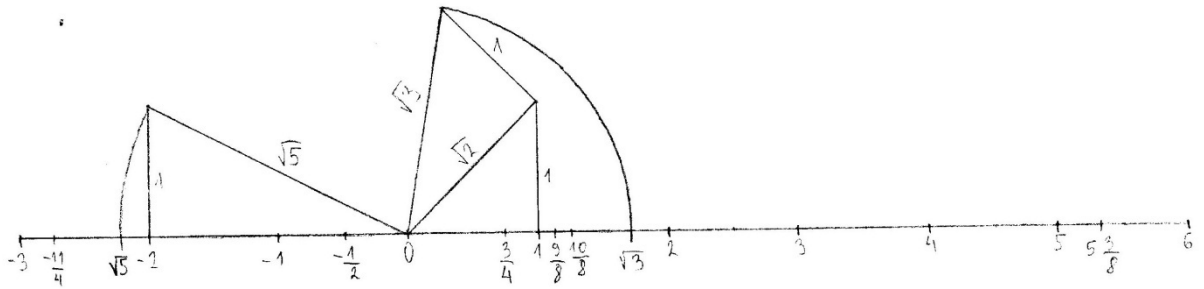
3.

$$\begin{aligned} & \left( \frac{9}{2} \cdot \frac{5}{3} - \frac{27}{4} \right) \cdot \frac{2}{3} - \frac{12}{24} - \frac{1}{6} \cdot \frac{9}{2} = \left( \frac{15}{2} - \frac{27}{4} \right) \cdot \frac{2}{3} - \frac{12}{24} - \frac{3}{4} = \left( \frac{30-27}{4} \right) \cdot \frac{2}{3} - \frac{12-18}{24} = \\ & \left( \frac{10}{3} \cdot \frac{1}{3} + \frac{2}{9} + \frac{4}{9} \right) \cdot \frac{8}{3} - \left( \frac{1}{5} - \frac{3}{40} \right) \cdot \frac{8}{5} = \left( \frac{10+2+4}{9} \right) \cdot \frac{8}{3} - \left( \frac{8-3}{40} \right) \cdot \frac{8}{5} = \frac{16}{9} \cdot \frac{8}{3} - \frac{5}{40} \cdot \frac{8}{5} = \\ & = \frac{4}{3} \cdot \frac{2}{3} - \frac{6}{24} = \frac{2}{3} - \frac{6}{24} = \frac{3}{4} + \frac{30}{24} = \frac{18+30}{24} = \frac{48}{24} = 2 \end{aligned}$$

4.

$$\begin{aligned} & \frac{\frac{4}{5} \cdot \left( \frac{4}{5} \cdot 1.25 \right)}{\frac{16}{25} - 0.04} + \frac{\left( 1.08 - \frac{2}{25} \right) \cdot \frac{4}{7}}{\left( \frac{59}{9} - \frac{13}{4} \right) \cdot \frac{36}{17}} + \left( \frac{6}{5} \cdot 0.5 \right) \cdot \frac{4}{5} = \frac{\frac{4}{5} \cdot \left( \frac{4}{5} \cdot \frac{5}{4} \right)}{\frac{16}{25} - \frac{1}{25}} + \frac{\left( \frac{27}{25} - \frac{2}{25} \right) \cdot \frac{4}{7}}{\frac{236-117}{36} \cdot \frac{36}{17}} + \left( \frac{6}{5} \cdot \frac{1}{2} \right) \cdot \frac{4}{5} = \\ & = \frac{\frac{4}{5} \cdot 1}{\frac{15}{25}} + \frac{\frac{25}{25} \cdot \frac{4}{7}}{\frac{119}{36} \cdot \frac{36}{17}} + \frac{6}{10} \cdot \frac{4}{5} = \frac{4}{15} + \frac{1 \cdot \frac{7}{4}}{\frac{7}{1}} + \frac{6}{10} \cdot \frac{5}{4} = \frac{4}{15} + \frac{7}{4} + \frac{3}{4} = \frac{4}{15} + \frac{7}{28} + \frac{3}{4} = \frac{4}{3} + \frac{1}{4} + \frac{3}{4} = \\ & = \frac{28}{12} = \frac{7}{3} \end{aligned}$$

5. Na brojevnom pravcu zadaj i poredaj po veličini :  $-\frac{1}{2}, \frac{3}{4}, \frac{10}{8}, -\frac{11}{4}, 5\frac{3}{8}, \sqrt{3}, -\sqrt{5}, 0, 3, -2, \frac{9}{8}$



6. Nakon poskupljenja od 30% cijena robe je 210 kuna. Za koliko kuna je cijena povećana?

$$\frac{210}{130\%} = \frac{210}{1.3} = 161.5 \text{ kn} \quad 210 - 161.5 = 48.5 \text{ kn} \quad \text{Cijena je porasla za 48.5 kn.}$$

7. Rastavi broj 1024 na proste faktore. Je li taj broj prost?

$$1024 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^{10} \quad \text{Taj broj nije prost.}$$

8. Umetnite između razlomaka  $\frac{1}{3}$  i  $\frac{2}{5}$  još tri razlomka.

$$\frac{1}{3} < x < \frac{2}{5} \quad x = \frac{3}{8}, \frac{36}{99}, \frac{363}{990}$$

9. Prikaži brojeve u racionalnom obliku : 2.667, 3.9, 1.25, 10.5

$$2.667 = \frac{2667}{1000} \quad 3.9 = \frac{39.9 - 3.9}{9} = \frac{36}{9} \quad 1.25 = \frac{125.5 - 12.5}{90} = \frac{113}{90}$$

$$10.5 = \frac{105}{10}$$