



Rješenja Štoperice 4. B

- racionalni brojevi



1. Nacrtaj brojevni pravac i na njemu označi

točke kojima su pridruženi brojevi

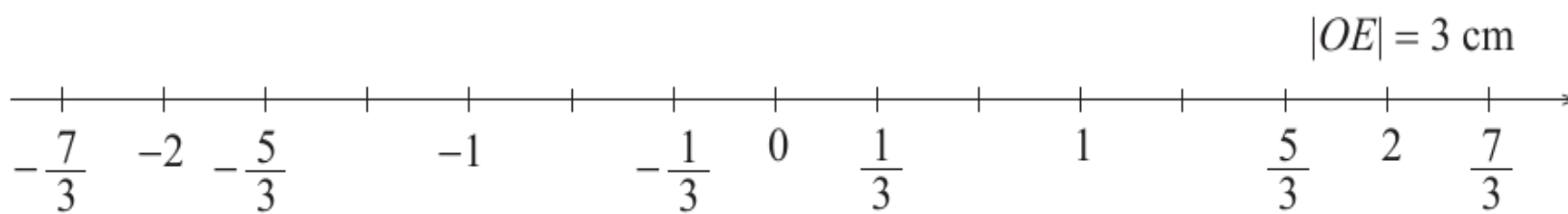
$-\frac{1}{3}, \frac{5}{3}$ i $-\frac{7}{3}$ te točke kojima su

pridruženi njima suprotni brojevi.





1.





2. Usporedi brojeve.

a) $\frac{1}{-2}$ i $\frac{-1}{3}$

b) 3 i $\frac{-2}{3}$

c) 0.25 i $\frac{1}{4}$





$$2. \quad \text{a)} \quad \frac{1}{-2} \text{ i } \frac{-1}{3}$$

$$\frac{-1}{2} \text{ i } \frac{-1}{3}$$

$$-1 \cdot 3 \quad -1 \cdot 2$$

$$-3 < -2$$

$$\frac{-1}{2} < \frac{-1}{3}$$

$$\text{b)} \quad 3 \text{ i } \frac{-2}{3}$$

$$3 > -\frac{2}{3}$$

$$\text{c)} \quad 0.25 \text{ i } \frac{1}{4}$$

$$\frac{25}{100} \text{ i } \frac{1}{4}$$

$$\frac{1}{4} = \frac{1}{4}$$

$$0.25 = \frac{1}{4}$$





3. Izračunaj.

a) $\frac{2}{5} - \frac{9}{10}$

b) $\frac{-3}{4} + \frac{5}{6} - \frac{2}{3}$

c) $\frac{5}{-6} + \frac{-3}{-4}$

d) $-2\frac{1}{5} + \frac{1}{2} - 0.7$

e) $-3.466 + 2.71$

f) $-1.23 - 2.02 + 6.21$





$$3. \quad \mathbf{a)} \quad \frac{2}{5} - \frac{9}{10} = \frac{4}{10} - \frac{9}{10} = \frac{-5}{10} = \frac{-1}{2}$$

$$\mathbf{b)} \quad \frac{-3}{4} + \frac{5}{6} - \frac{2}{3} = \frac{-9}{12} + \frac{10}{12} - \frac{8}{12} = \frac{-7}{12}$$

$$\mathbf{c)} \quad \frac{5}{-6} + \frac{-3}{-4} = \frac{-5}{6} + \frac{3}{4} = \frac{-10}{12} + \frac{9}{12} = \frac{-1}{12}$$



$$\mathbf{d)} \quad -2\frac{1}{5} + \frac{1}{2} - 0.7 = -\frac{11}{5} + \frac{1}{2} - \frac{7}{10} =$$

$$\frac{-22}{10} + \frac{5}{10} - \frac{7}{10} = \frac{-24}{10} = \frac{-12}{5} = -2\frac{2}{5}$$

$$\mathbf{e)} \quad -3.466 + 2.71 = -0.756$$

$$\mathbf{f)} \quad -1.23 - 2.02 + 6.21 = 2.96$$





4. Izračunaj.

$$\text{a) } -\frac{5}{6} \cdot \frac{1}{4}$$

$$\text{b) } -3 - \frac{2}{3} \cdot \left(\frac{5}{6} + \frac{8}{3} \right)$$

$$\text{c) } \frac{3}{-4} : \frac{9}{8}$$

$$\text{d) } \frac{1}{2} : 0.1 - \frac{3}{4} \cdot 2\frac{1}{5} + 1$$





$$4. \quad \text{a)} \quad -\frac{5}{6} \cdot \frac{1}{4} = -\frac{5}{24}$$

$$\text{b)} \quad -3 - \frac{2}{3} \cdot \left(\frac{5}{6} + \frac{8}{3} \right) = -3 - \frac{2}{3} \cdot \left(\frac{5}{6} + \frac{16}{6} \right) =$$

$$= -3 - \frac{2}{3} \cdot \frac{21}{6} = -3 - \frac{7}{3} = \frac{-9}{3} - \frac{7}{3} =$$

$$= \frac{-16}{3} = -5\frac{1}{3}$$





$$\text{c) } \frac{3}{-4} : \frac{9}{8} = \frac{-3}{4} \cdot \frac{8}{9} = -\frac{2}{3}$$

$$\text{d) } \frac{1}{2} : 0.1 - \frac{3}{4} \cdot 2\frac{1}{5} + 1 =$$

$$= \frac{1}{2} : \frac{1}{10} - \frac{3}{4} \cdot \frac{11}{5} + 1 =$$

$$= \frac{1}{2} \cdot \frac{10}{1} - \frac{33}{20} + 1 =$$

$$= 5 - \frac{33}{20} + 1 = 5 - 1\frac{13}{20} + 1 = 4\frac{7}{20}$$





5. Izračunaj.

$$\text{a) } \frac{5}{2} : \frac{-3}{4}$$

$$\text{b) } \left(\frac{4}{3} + 1 : \frac{2}{3} \right) : \left(3 + \frac{1}{5} - \frac{1}{5} \cdot \frac{3}{2} \cdot 10 \right)$$





$$5. \quad \text{a) } \frac{5}{2} : \frac{-3}{4} = \frac{5}{\cancel{2}} \cdot \frac{\cancel{4}^{-2}}{3} = \frac{-10}{3} = -3\frac{1}{3}$$

$$\text{b) } \left(\frac{4}{3} + 1 : \frac{2}{3} \right) : \left(3 + \frac{1}{5} - \frac{1}{5} \cdot \frac{3}{2} \cdot 10 \right) =$$

$$= \left(\frac{4}{3} + \frac{3}{2} \right) : \left(3 + \frac{1}{5} - 3 \right) =$$

$$= \left(\frac{8}{6} + \frac{9}{6} \right) : \frac{1}{5} = \frac{17}{6} \cdot 5 =$$

$$= \frac{85}{6} = 14\frac{1}{6}$$





6. Izračunaj.

$$\frac{1}{2} \cdot \frac{1}{3} - \frac{1}{3} \cdot \left(-\frac{1}{2}\right) + \frac{3}{4} \cdot \frac{1}{3} - \frac{1}{9} \cdot \left(-\frac{1}{2}\right)$$





$$6. \quad \frac{1}{2} \cdot \frac{1}{3} - \frac{1}{3} \cdot \left(-\frac{1}{2}\right) + \frac{3}{4} \cdot \frac{1}{3} - \frac{1}{9} \cdot \left(-\frac{1}{2}\right) =$$

$$= \frac{1}{6} + \frac{1}{6} + \frac{1}{4} + \frac{1}{18} =$$

$$= \frac{6+6+9+2}{36} = \frac{23}{36}$$





7. Izračunaj.

$$\left(\left(\left(\frac{7}{2} - 2 : \frac{5}{3} + \frac{7}{3} \right) \cdot 10 - \frac{19}{3} \right) : 2 - 26 \right)$$





$$\begin{aligned} 7. & \left(\left(\frac{7}{2} - 2 : \frac{5}{3} + \frac{7}{3} \right) \cdot 10 - \frac{19}{3} \right) : 2 - 26 = \\ & = \left(\left(\frac{7}{2} - 2 \cdot \frac{3}{5} + \frac{7}{3} \right) \cdot 10 - \frac{19}{3} \right) : 2 - 26 = \\ & = \left(\left(\frac{7}{2} - \frac{6}{5} + \frac{7}{3} \right) \cdot 10 - \frac{19}{3} \right) : 2 - 26 = \\ & = \left(\left(\frac{105}{30} - \frac{36}{30} + \frac{70}{30} \right) \cdot 10 - \frac{19}{3} \right) : 2 - 26 = \end{aligned}$$





$$= \left(\frac{139}{30} \cdot 10 - \frac{19}{3} \right) : 2 - 26 =$$

$$= \left(\frac{139}{3} - \frac{19}{3} \right) : 2 - 26 =$$

$$= \frac{120}{3} : 2 - 26 =$$

$$= \frac{60}{3} - 26 = 20 - 26 = -6$$





8. Od količnika brojeva $-5\frac{2}{5}$ i $-2\frac{1}{2}$ oduzmi

razliku brojeva $3\frac{9}{25}$ i 3.2.





$$8. \quad -5\frac{2}{5} : \left(-2\frac{1}{2}\right) - \left(3\frac{9}{25} - 3.2\right) =$$

$$= -\frac{27}{5} \cdot \frac{-2}{5} - \left(\frac{84}{25} - \frac{16}{5}\right) =$$

$$= \frac{54}{25} - \left(\frac{84}{25} - \frac{80}{25}\right) =$$

$$= \frac{54}{25} - \frac{4}{25} = \frac{50}{25} = 2$$

