

MATEMATIKA 7.razred

Ponavljanje cjeline : Racionalni brojevi

6.4.2020.

Danas ćemo ponoviti računanje s racionalnim brojevima. Sve zadatke prepisite u svoje bilježnice i pokušajte ih uraditi samostalno. Nakon što uradite provjerite svoja rješenja.

Zadaci:

1. Navedene razlomke skрати:

a) $\frac{-32}{48} =$

b) $\frac{-125}{525} =$

2. Usporedi po veličini sljedeće racionalne brojeve:

a) $\frac{-7}{6}$ i $\frac{-13}{12}$

b) -3.2 i $\frac{-16}{5}$

3. Izračunaj:

a) $\frac{-3}{4} + \frac{7}{6} =$

e) $-4.7 \cdot 1.8 =$

b) $\frac{5}{16} - 0.75 =$

f) $-4.72 + 5.9 =$

c) $\frac{-18}{25} \cdot \left(\frac{-20}{27}\right) =$

g) $-1.296 : 0.24 =$

d) $3\frac{3}{4} : \left(-3\frac{3}{8}\right) =$

h) $-5.34 - (-3.8) =$

4. Izračunaj, pazi na redoslijed računskih radnji i zagrade.

a) $\frac{-3}{4} - \frac{3}{4} \cdot \frac{1}{9} =$

b) $\left(-\frac{1}{2} + \frac{3}{4}\right) : \left(\frac{3}{8} - \frac{1}{4}\right) =$

$$c) 3.5 : \frac{1}{2} - \left(\frac{3}{8} : \frac{3}{4} - 0.5 \right) =$$

$$d) \left(-1 + \frac{5}{8} \right) : \frac{3}{4} - 2 : \left(\frac{1}{2} - \frac{1}{4} \right) =$$

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

5. Količnik brojeva $-\frac{8}{9}$ i $-\frac{4}{15}$ uvećaj za umnožak brojeva $-\frac{5}{4}$ i -0.5 .

Rješenja zadataka:

Zad. 1. a) $\frac{-32}{48} = \frac{-2}{3}$ b) $\frac{-125}{525} = \frac{-5}{21}$

Zad. 2. a) $-\frac{7}{6}$ i $-\frac{13}{12}$ b) -3.2 i $-\frac{16}{5}$
 $-\frac{7}{6} = \frac{-14}{12}$ $-\frac{7}{6} < \frac{-13}{12}$ $-3.2 = \frac{-32}{10}$ $-3.2 = \frac{-16}{5}$

Zad. 3. a) $-\frac{3}{4} + \frac{7}{6} = \frac{-9+14}{12} = \frac{5}{12}$ b) $\frac{5}{16} - 0.75 = \frac{5}{16} - \frac{3}{4} = \frac{5-12}{16} = \frac{-7}{16}$ c) $\frac{-18}{25} \cdot \left(\frac{-20}{27} \right) = \frac{2 \cdot 4}{5 \cdot 3} = \frac{8}{15}$
 (Note: $0.75 = \frac{75}{100} = \frac{3}{4}$)

d) $3\frac{3}{4} : \left(-3\frac{3}{8} \right) = \frac{15}{4} : \left(\frac{-27}{8} \right) = \frac{5}{4} \cdot \frac{8}{27} = \frac{10}{9} = -1\frac{1}{9}$ e) $-4.7 \cdot 1.8 = -8.46$ f) $-4.72 + 5.9 = 1.18$
 $\frac{4.7 \cdot 1.8}{8.46}$ g) $-1.296 : 0.24 = -5.4$
 $\frac{129.6 : 24 = 5.4}{96}$ h) $-5.34 - (-3.8) = -5.34 + 3.8 = -1.54$
 $\frac{5.34}{-3.8} = 1.54$

Zad. 4. a) $-\frac{3}{4} - \frac{3}{4} \cdot \frac{1}{3} = -\frac{3}{4} - \frac{1}{4} = \frac{-3-1}{4} = \frac{-4}{4} = -1$ b) $\left(-\frac{1}{2} + \frac{3}{4} \right) : \left(\frac{3}{8} - \frac{1}{4} \right) = \frac{-2+3}{4} : \frac{3-2}{8} = \frac{1}{4} : \frac{1}{8} = \frac{1}{4} \cdot \frac{8}{1} = 2$

$$\begin{aligned}
 \underline{c)} \quad 3.5 : \frac{1}{2} - \left(\frac{3}{8} : \frac{3}{4} - 0.5 \right) &= \\
 &= \frac{35}{10} : \frac{1}{2} - \left(\frac{3}{8} \cdot \frac{4}{3} - \frac{5}{10} \right) \\
 &= \frac{7}{2} \cdot \frac{2}{1} - \left(\frac{1}{2} - \frac{1}{2} \right) \\
 &= 7 - 0 = 7
 \end{aligned}$$

$$\begin{aligned}
 \underline{d)} \quad \left(-1 + \frac{5}{8} \right) : \frac{3}{4} - 2 : \left(\frac{1}{2} - \frac{1}{4} \right) &= \\
 &= \left(\frac{-8+5}{8} \right) \cdot \frac{4}{3} - 2 : \left(\frac{2-1}{4} \right) \\
 &= \frac{-3}{8} \cdot \frac{4}{3} - 2 : \frac{1}{4} \\
 &= -\frac{1}{2} - 2 \cdot \frac{4}{1} \\
 &= -\frac{1}{2} - 8 \\
 &= \frac{-1-16}{2} = \frac{-17}{2} = -8\frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 \underline{e)} \quad \frac{\left(-\frac{4}{3} + \frac{3}{2} \right) \cdot \frac{3}{2} + 1}{2 + \frac{5}{2} : \left(-\frac{3}{4} \right)} &= \\
 &= \frac{\left(\frac{-8+9}{6} \right) \cdot \frac{3}{2} + 1}{2 + \frac{5}{2} \cdot \left(-\frac{4}{3} \right)} \\
 &= \frac{\frac{1}{6} \cdot \frac{3}{2} + 1}{2 + \left(-\frac{10}{3} \right)} \\
 &= \frac{\frac{1}{4} + 1}{2 - \frac{10}{3}} \\
 &= \frac{\frac{5}{4}}{\frac{-4}{3}} = \frac{-5 \cdot 3}{4 \cdot 4} = -\frac{15}{16}
 \end{aligned}$$

Zad. 6.

$$\begin{aligned}
 \left(-\frac{8}{9} : \left(-\frac{4}{15} \right) \right) + \left(-\frac{5}{4} \cdot (-0.5) \right) &= \\
 &= \left(-\frac{8}{9} \cdot \frac{-15}{4} \right) + \left(-\frac{5}{4} \cdot \left(-\frac{1}{2} \right) \right) \\
 &= \frac{10}{3} + \frac{5}{8} \\
 &= \frac{80+15}{24} \\
 &= \frac{95}{24} = 3\frac{23}{24}
 \end{aligned}$$

DOMAĆI RAD:

Udžbenik, str. 179. zadatak 22.