

## MATEMATIKA U STRUCI (STOLARI)

### PONAVLJANJE IZ PRIRODNIH, CIJELIH I RACIONALNIH BROJEVA

#### ZADACI:

**Zadatak 1.** Pretvori u razlomak slijedeće decimalne brojeve:

a) (1 bod)  $7,3 =$       b) (1 bod)  $9,79 =$       c) (1 bod)  $3,581 =$

**Zadatak 2.** (4 boda) Izračunaj kalkulatorom:  $\sqrt{9409} + 36^3 - 172^2 =$

**Zadatak 3.** Izračunaj:

a) (4 boda)  $-5 \cdot (-13) + 976 : (-8) - 39 \cdot 15 =$

b) (5 boda)  $-8 - [-32 - (7 - 12)] =$

c) (8 boda)  $\{3 + 2 \cdot [6 \cdot (9 + 2 \cdot 5) + 7]\} \cdot 6 + 8 =$

**Zadatak 4.** Izračunaj:

a) (3 boda)  $-6 \cdot [41,87 + 2,38 \cdot (-6,1)] =$

b) (3 boda)  $\frac{29}{16} \cdot \frac{12}{29} =$

c) (4 boda)  $5\frac{1}{7} : \frac{42}{5} =$

d) (4 boda)  $\frac{4}{9} + \frac{3}{13} =$

Kriterij ocjenjivanja:

0 – 15 (1)

16 – 20 (2)

21 – 26 (3)

27 – 32 (4)

33 – 38 (5)

# RJEŠENJA:

## Zadatak 1.

$$\text{a) } 7,3 = \frac{73}{10}$$

$$\text{b) } 9,79 = \frac{979}{100}$$

$$\text{c) } 3,581 = \frac{3581}{1000}$$

## Zadatak 2.

$$\begin{aligned}\sqrt{9409} + 36^3 - 172^2 &= \\ = 97 + 46656 - 29584 &= \\ = 17169\end{aligned}$$

## Zadatak 3.

$$\begin{aligned}\text{a) } -5 \cdot (-13) + 976 : (-8) - 39 \cdot 15 &= \\ = 65 - 122 - 585 &= \\ = 642\end{aligned}$$

$$\begin{aligned}\text{b) } -8 - [-32 - (7 - 12)] &= \\ = -8 - [-32 - (-5)] &= \\ = -8 - [-32 + 5] &= \\ = -8 - (-27) &= \\ = -8 + 27 &= \\ = 19\end{aligned}$$

$$\begin{aligned}
\text{c)} \quad & \{3 + 2 \cdot [6 \cdot (9 + 2 \cdot 5) + 7]\} \cdot 6 + 8 = \\
& = \{3 + 2 \cdot [6 \cdot (9 + 10) + 7]\} \cdot 6 + 8 = \\
& = \{3 + 2 \cdot [6 \cdot 19 + 7]\} \cdot 6 + 8 = \\
& = \{3 + 2 \cdot [114 + 7]\} \cdot 6 + 8 = \\
& = \{3 + 2 \cdot 121\} \cdot 6 + 8 = \\
& = \{3 + 242\} \cdot 6 + 8 = \\
& = 245 \cdot 6 + 8 = \\
& = 1470 + 8 = \\
& = 1478
\end{aligned}$$

#### **Zadatak 4.**

$$\begin{aligned}
\text{a)} \quad & -6 \cdot [41,87 + 2,38 \cdot (-6,1)] = \\
& = -6 \cdot [41,87 - 14,518] = \\
& = -6 \cdot 27,352 = \\
& = -164,112
\end{aligned}$$

$$\begin{aligned}
\text{b)} \quad & \frac{29}{16} \cdot \frac{12}{29} = \quad ( \quad 29 \text{ i } 29 \text{ kratimo sa } 29. \quad 29 : 29 = 1, \quad 29 : 29 = 1. \\
& \quad \quad \quad 16 \text{ i } 12 \text{ kratimo sa } 4. \quad 16 : 4 = 4, \quad 12 : 4 = 3. \quad ) \\
& = \frac{1}{4} \cdot \frac{3}{1} = \\
& = \frac{3}{4}
\end{aligned}$$

$$c) \quad 5\frac{1}{7} : \frac{42}{5} = \quad \left( \quad 5\frac{1}{7} = \frac{5 \cdot 7 + 1}{7} = \frac{35 + 1}{7} = \frac{36}{7} \quad \right)$$

$$= \frac{36}{7} \cdot \frac{5}{42} = \quad \left( \quad 36 \text{ i } 42 \text{ kratimo sa } 6. \quad 36 : 6 = 6, \quad 42 : 6 = 7. \right)$$

7 i 5 ne možemo skratiti. )

$$= \frac{6}{7} \cdot \frac{5}{7} =$$

$$= \frac{30}{49}$$

$$d) \quad \frac{4}{9} + \frac{3}{13} = \quad \left( \quad 9 \text{ i } 13 \text{ su relativno prosti brojevi, pa je } 9 \cdot 13 = 117 \text{ najmanji zajednički}$$

višekratnik od 9 i 13. To znači da je 117 najmanji zajednički nazivnik.

$$117 : 9 = 13 ; \quad 13 \cdot 4 = 52$$

$$117 : 13 = 9 ; \quad 9 \cdot 3 = 27 \quad \quad \quad )$$

$$= \frac{52 + 27}{117} =$$

$$= \frac{79}{117}$$