

1. PROVERA ZNANJA

① $3 - 2 \cdot 0.5 + \frac{3}{4} \cdot 12 - 1 =$
 $3 - 1 + 9 - 1 =$
 (D) 10

② NAJMANJI ZAJEDNIČKI VIŠEKRAVNİK

9, 12, 15	3
3, 4, 5	3
1, 4, 5	4
1, 1, 5	5
1 1 1	

$V(9, 12, 15) = 3 \cdot 3 \cdot 4 \cdot 5 = 180$

Za 180 dana. (A)

2* ANA IMA 24 TULIPANA I 36 RUŽA. SLAŽE BUKETE TD U SVAKOM BUDE PODJEDNAK BR. TULIPANA I RUŽA, A DA ISKORISTI SVE CVETOVE.

DODATNO PONUDI MO:

NAJVEĆI ZAJEDNIČKI DJELITELI

a) 24 i 36

a) KOLIKO NAJVIŠE BUKETA MOŽE SLOŽITI?

b) KOLIKO ĆE BITI TULIPANA, A KOLIKO RUŽA U SVAKOM

24, 36	2
12, 36	2
6, 18	2
3, 9	3
1, 3	

$2 \cdot 2 \cdot 2 \cdot 3 = 24$ JE NAJVEĆI ZAJEDNIČKI DJELITELI

$2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 1 = 72$ NAJMANJI ZAJ. VIŠEKRAVNİK.

a) $D(24, 36) = 2 \cdot 2 \cdot 3 = 12$

(2, 3) a) Može složiti najviše 12 buketa.

$24 : 12 = 2$ $36 : 12 = 3$

b) U SVAKOM ĆE BITI 2 TULIPANA I 3 RUŽE.

24, 5 | 1 RELATIVNO PROSTI

$D(24, 5) = 1$

$V(24, 5) = 24 \cdot 5 = 120$

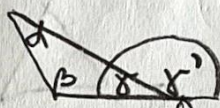
③ $y = 3x - 1$
 $5x + 2y = 20$

$5x + 2 \cdot (3x - 1) = 20$
 $5x + 6x - 2 = 20$
 $11x = 22$
 $x = 2$

$y = 3 \cdot 2 - 1 = 5$

(B) $y = 5$

④



$\alpha = 36^\circ$
 $\beta = 104^\circ$

DRUGI NAČIN

$\gamma' = \alpha + \beta$ $\gamma' = 140^\circ$

Vanjski kut (ZAJEDNO S UNUTARNJIM DAJE 180°)

$\gamma = 180^\circ - (36^\circ + 104^\circ)$

$\gamma = 180^\circ - 140^\circ$

$\gamma = 40^\circ$ | $\gamma' = 180^\circ - 40^\circ = 140^\circ$

Vanjski kut iznosi 140° (C)

⑤



$d = 8 \text{ cm}$

$O = 2r\pi$

$O = d\pi$

$O = 8 \cdot \pi \text{ cm}$

(D)

⑥ φ ⑦

$A = \frac{22 + 25 + 19 + 28 + 26}{5}$

$A = \frac{120}{5} = 24$ (C)

⑧ $0.02 = \frac{2}{100} = \frac{1}{50}$

Recipročan: $\frac{50}{1} = 50$ (A)

⑨

$S_n = \frac{n(n+1)}{2}$

$S_{100} = \frac{100 \cdot (100+1)}{2}$

$S_{100} = 50 \cdot 101 = 5050$

$5 + 5 + 0 + 0 = 10$ (D)

⑪

$\frac{20 \cdot 4}{25 \cdot 4} = \frac{80}{100} = 80\%$

$20 : 25 = 0.8$

$\frac{200}{250} = 80\%$

(A)

⑩ $8 \cdot 15 = 120 \text{ €}$ ukupno

(D) $120 : 10 = 12 \text{ €}$ svatko od 10 ljudi

DRUGI NAČIN:

$\begin{matrix} 8 & 15 \text{ €} \\ \downarrow & \uparrow \\ x & 10 \text{ €} \end{matrix}$ $8 : x = 10 : 15$
 $10x = 120$ $x = 12 \text{ €}$

12. $2(x-2) - 7(1-3x) = 35$
 $2x - 4 - 7 + 21x = 35$
 $23x = 46$
 $x = 2$ (B)

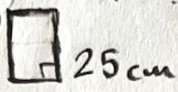
13. $3.14 \in \mathbb{Q}$ (RACIONALNI BROJEVI) (C)

(Q) Priujeti racionalnih brojeva:

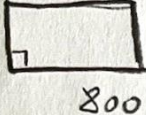
$0.5, -2.74, \frac{3}{4}, 2.\dot{6}, -3.2\dot{5}\dot{7}, \sqrt[10]{100}$

(I) Priujeti iracionalnih:

$\sqrt[10]{10}, 4\sqrt{10}, \sqrt{2}, -3\sqrt{7}, 1+\sqrt{3}, (2+\sqrt{5})^2, \dots$

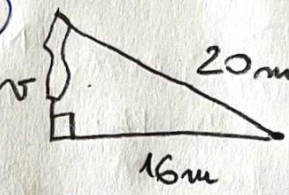
14. plošica

 $P = 25 \cdot 16$
 $P = 400 \text{ cm}^2$

TERASA


 $P = 800 \cdot 700$
 $P = 560000 \text{ cm}^2$

$P_T : P_p = 560000 : 400$
 $= 5600 : 4$

(B) $= 1400$ PLOŠICA

15. 
 $v^2 = 20^2 - 16^2$
 $v^2 = 400 - 256$
 $v^2 = 144$
 $v = 12 \text{ m}$ (D)

16. RACIONALNI: $5.3, -\frac{5}{7}, \sqrt[6]{36}$

IRACIONALNI (BESKONAČNI):

$4\sqrt{5}, \sqrt{13}, 3\pi$ (C)

17. $\alpha : \beta : \gamma = 2 : 3 : 5$

$2k + 3k + 5k = 180^\circ$

$10k = 180 / : 10$

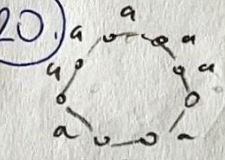
$k = 18$

$\alpha = 2 \cdot 18$

$\beta = 3 \cdot 18$

$\gamma = 5 \cdot 18 = 90^\circ$ (A)

19. $20000 = 2 \cdot 10^4$ (A)

20. 
 $O_M = 8a \quad a = 2 \text{ m}$
 $O = 8 \cdot 2$
 $O = 16 \text{ m} = 1600 \text{ cm}$

$1600 : 40 = 160 : 4 = 40$

Treba kupiti 40 tulipana. (B)

18. x - broj stranica knjige

$\frac{5}{12}x + 0.2x + 69 = x$

$\frac{5}{12}x + \frac{1}{5}x + 69 = x \quad | \cdot 60$

$25x + 12x + 4140 = 60x$

$-23x = -4140$

$23x = 4140$

$x = 180$ (D)

2. PРОВЈЕРА ЗНАЊА

1. $\sqrt{36} + \sqrt{64} =$
 $6 + 8 =$
 14

(D)

2. $3:2$, 150 €
 $3k + 2k = 5k$
 $5k = 150$
 $k = 30$

Ivan: $3 \cdot 30 = 90 \text{ €}$
 Martin: $2 \cdot 30 = 60 \text{ €}$

Odg: Martin će dobiti 60 €. (C)

3. x - cijena soka
 y - cijena pizze

$5x + 3y = 34 \quad | \cdot (-3)$

$3x + 4y = 38 \quad | \cdot 5$

$-15x - 9y = -102 \quad | +$
 $15x + 20y = 190$

$11y = 88 \quad | : 11$

$y = 8 \text{ €}$

$3x + 4 \cdot 8 = 38$

$3x = 38 - 32$

$3x = 6$

$x = 2 \text{ €}$

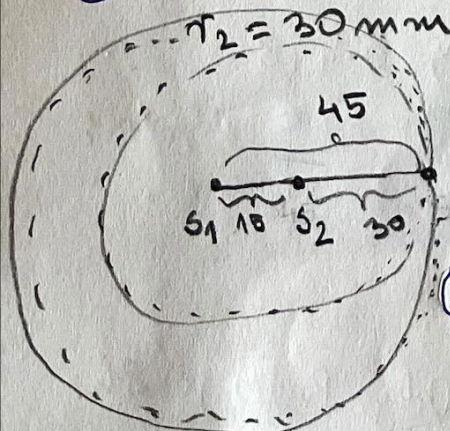
(A)

5. $-3 - (-3) \cdot 5 + (-7) \cdot (-2) - |-6| =$

$-3 + 15 + 14 - 6 =$

(A) $29 - 9 = 20$

6. $r_1 = 45 \text{ mm}$
 $r_2 = 30 \text{ mm}$



Kružnice se dodiruju iznutra. (D)

7. Npr. $100 \cdot 2 \approx 100$

8. $125 \cdot 5 = 625$ (C)

9. $(x-3)(2x+1) =$
 $2x^2 + x - 6x - 3 =$
 $2x^2 - 5x - 3$

10. $975 : 5 = 195$
 $\begin{array}{r} -5 \\ 975 \\ \underline{-5} \\ 47 \\ \underline{-45} \\ 25 \\ \underline{-25} \\ 0 \end{array}$ (A)

4. $N = \{1, 2, 3, \dots, 24, \dots\}$ PRIRODNI BR.

$Z = \{\dots, -3, -2, -1, 0, 1, 2, \dots\}$ CIJELE BR.

$Q = \left\{ \frac{a}{b} : a \in Z, b \in Z, b \neq 0 \right\}$
 RACIONALNI

(C)

Primeri racionalnih:

$-2.43, 3.6, 3.275, \frac{3}{4}, 0, -5, -2, \frac{1}{3}, \sqrt{36}, \sqrt{4}, \frac{3\pi}{\pi}$

Primeri IRACIONALNIH:

$\sqrt{2}, 2\sqrt{3}, \frac{\sqrt{7}}{2}, \pi, 3\pi$

R - REALNI BROJEVI

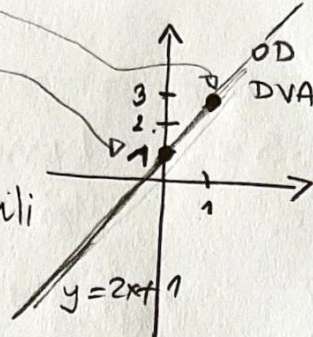
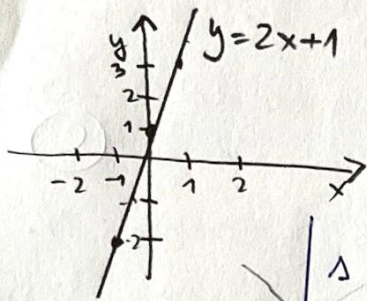
$R = Q \cup I$

Realni = Racionalni + Iracionalni brojevi

$Q \cap I = \emptyset$

11. $y = 2x + 1$

x	-1	0	1
y	-2	1	3



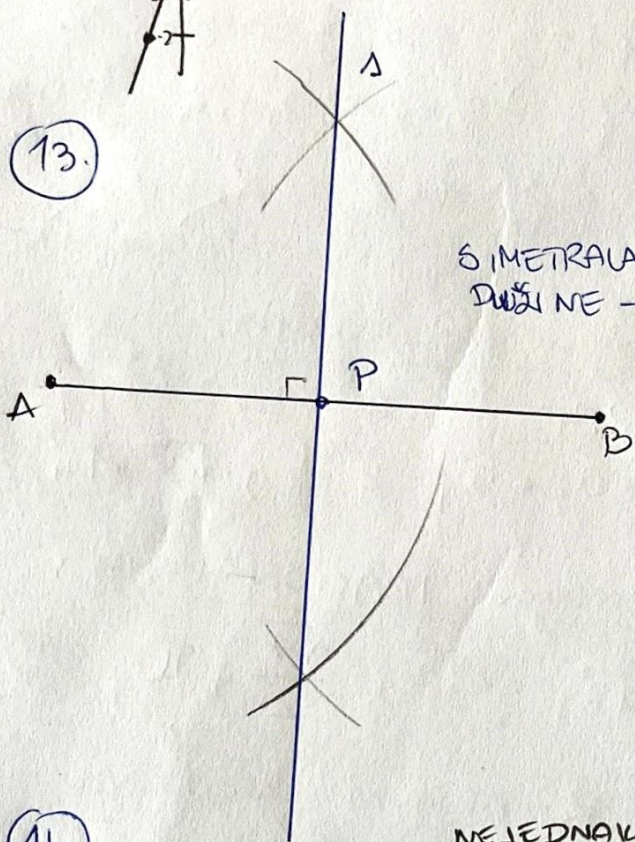
OD BROJA 1 POMAĆ:
DVA GORE I JEDAN UDESNO

12. BROJ JE DJEIV S 9
AKO MU JE ZBROJ ZN.
DJEIV S 9.
(150 JE I ZA BROJ 3.)

odgovor: (D) 540 i 108

$$\begin{array}{r} 5+4+0=9 \\ \hline 1+0+8=9 \end{array}$$

13.



SIMETRALA
DVA NE - dijeli dužinu
na dva jednaka
djela i dvueta
je na nji

14.

NEJEDNAKOST TROKUTA
MORA
VRIJEDITI

$a = 3$
 $b = 4$
 $c = 9$

NE!
↓
3 + 4 nije veće od 9

$a + b > c$
$a + c > b$
$b + c > a$

15.

DOLAZAK: 8 €
SAT: 5 €

a) y - ZAVISNA VELIČINA (ZARADA)
x - NEZAVISNA VELIČINA (BROJ SATI) RADA

$y = 5 \cdot x + 8$

$y = 5x + 8$ L.W. OVISNOST

b) $x = 4$ h
 $y = ?$

$y = 5 \cdot 4 + 8$
 $y = 28 €$ Odgovor:

Zaradit će 28 €.

c) $y = 48$
 $x = ?$

$48 = 5x + 8$
 $48 - 8 = 5x$
 $40 = 5x \quad | : 5$
 $8 = x$

tj. $x = 8$ Odg: Radio je 8h.