



PROVIMI I MATURËS/PROVIMI PROFESIONAL
QERSHOR, 2025

MATEMATIKË (NIVELI BAZË)
UDHËZIM PËR VLERËSIM

Zgjidhjet e detyrave me zgjedhje të shumëfishtë

Numri rendor i detyrës	Përgjigja e saktë
1.	B
2.	A
3.	C
4.	D
5.	B
6.	A
7.	B
8.	C

9.

$$x^2y + y^3 = y(x^2 + y^2) \dots\dots\dots 1 \text{ pikë}$$

$$\frac{y(x^2 + y^2)}{(x^2 - y^2)(x^2 + y^2)} = \frac{y}{x^2 - y^2} \dots\dots\dots 1 \text{ pikë}$$

$$\frac{x}{x^2 - y^2} - \frac{y}{x^2 - y^2} = \frac{x - y}{(x - y)(x + y)} = \frac{1}{x + y} \dots\dots\dots 1 \text{ pikë}$$

10.

Zbaton rregullin e pjesëtueshmërisë me 5 :

$$5 \cdot 5 \text{ (0 nuk mund të jetë në vendin e qindësheve)} \dots\dots\dots 1 \text{ pikë}$$

Zbaton rregullin e pjesëtueshmërisë me 3 :

$$\text{Numrat e kërkuar janë } 525, 555, 585 \dots\dots\dots 1 \text{ pikë}$$

11.

Mënyra I:

$$G_1 = 285 \cdot 3 = 855 \dots\dots\dots 1 \text{ pikë}$$

$$G_1 = G - \frac{G \cdot 5}{100} \dots\dots\dots 1 \text{ pikë}$$

$G = 900 \text{ €}$ 1 pikë

Mënyra II:

$$\frac{95}{100} x \cdot \frac{1}{3} = 285 \text{ 1 pikë}$$

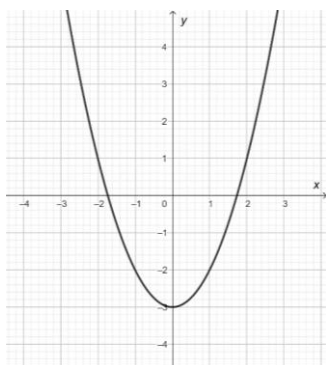
$$x = \frac{285 \cdot 3 \cdot 100}{95} \text{ 1 pikë}$$

$$x = 900 \text{ €} \text{ 1 pikë}$$

12.

$$\frac{x^2 + 1}{4} - \frac{5 - x^2}{2} > 0 \Rightarrow x^2 + 1 - 10 + 2x^2 > 0 \Rightarrow x^2 - 3 > 0 \text{ 1 pikë}$$

$$x_1 = \sqrt{3}, \quad x_2 = -\sqrt{3} \text{ 1 pikë}$$



$$x \in (-\infty, -\sqrt{3}) \cup (\sqrt{3}, +\infty) \text{ 1 pikë}$$

13.

$$y = kx + n$$

$$\begin{cases} 20 = 150k + n \\ 30 = 300k + n \end{cases} \text{ 1 pikë}$$

$$\text{Zgjidhja e sistemit, p.sh. } \begin{cases} 20 = 150k + n \\ 10 = 150k \end{cases} \text{ 1 pikë}$$

$$\begin{cases} n = 10 \\ k = \frac{1}{15} \end{cases} \text{ 1 pikë}$$

$$y = \frac{1}{15}x + 10 \text{ 1 pikë}$$

14.

$$3^x \cdot 2^x \cdot \frac{1}{2} = 3 \cdot 6^{2-x} \dots\dots\dots 1 \text{ pikë}$$

$$6^x = 6^{3-x} \dots\dots\dots 1 \text{ pikë}$$

$$6^x = 6^{3-x} \Rightarrow x = 3 - x \Rightarrow x = \frac{3}{2} \dots\dots\dots 1 \text{ pikë}$$

15.

$$\sin^2 \alpha = 1 - \cos^2 \alpha \Rightarrow \sin^2 \alpha = \frac{9}{25} \dots\dots\dots 1 \text{ pikë}$$

$$\alpha \in \left(\pi, \frac{3\pi}{2} \right) \Rightarrow \sin \alpha = -\frac{3}{5} \dots\dots\dots 1 \text{ pikë}$$

$$\operatorname{tg} \alpha \cdot \operatorname{ctg} \alpha = 1 \dots\dots\dots 1 \text{ pikë}$$

$$\operatorname{tg} \alpha \cdot \operatorname{ctg} \alpha + \frac{1}{\sin \alpha} = 1 - \frac{5}{3} = -\frac{2}{3} \dots\dots\dots 1$$

pikë

16.

$$k = -1 \wedge n = -p \dots\dots\dots 1 \text{ pikë}$$

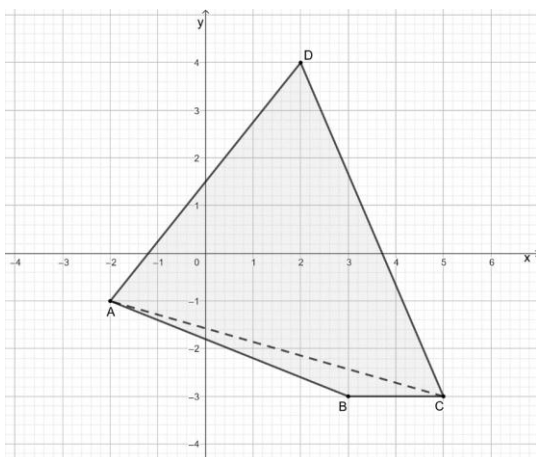
$$\text{Forma kanonike e ekuacionit të hiperbolës: } \frac{x^2}{10} - y^2 = 1, \quad a^2 = 10 \wedge b^2 = 1 \dots\dots 1 \text{ pikë}$$

$$\text{Kushti i prekjes: } a^2 k^2 - b^2 = n^2 \Rightarrow 10 \cdot 1 - 1 = p^2 \dots\dots\dots 1 \text{ pikë}$$

$$p = \pm 3 \dots\dots\dots 1 \text{ pikë}$$

17.

Mënyra I



$A(-2, -1), B(3, -3), C(5, -3), D(2, 4)$ 1 pikë

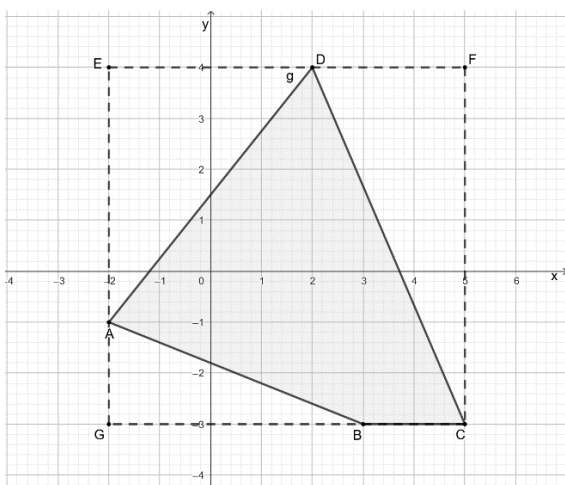
$$S_{\triangle ABC} = \frac{1}{2} |-2(-3 - (-3)) + 3(-3 - (-1)) + 5(-1 - (-3))| = 2$$

ose

$$S_{\triangle ADC} = \frac{1}{2} |-2(4 - (-3)) + 2(-3 - (-1)) + 5(-1 - 4)| = \frac{43}{2} \text{ 1 pikë}$$

$$S_{\square ABCD} = S_{\triangle ABC} + S_{\triangle ADC} = \frac{47}{2} \text{ 1 pikë}$$

Mënyra II

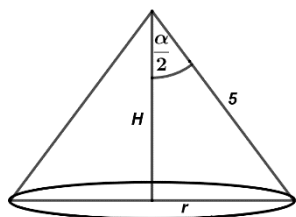


$$S_{\square GCFE} = 7 \cdot 7 = 49 \text{ 1 pikë}$$

$$S_{\triangle AGB} = \frac{2 \cdot 5}{2} = 5, \quad S_{\triangle DFC} = \frac{3 \cdot 7}{2} = \frac{21}{2}, \quad S_{\triangle AED} = \frac{5 \cdot 4}{2} = 10 \text{ 1 pikë}$$

$$\Rightarrow S = \frac{47}{2} \text{ 1 pikë}$$

18.



$$\cos \frac{\alpha}{2} = \frac{H}{5} \Rightarrow H = 4 \text{ cm} \dots\dots\dots 1 \text{ pikë}$$

$$r^2 = 5^2 - 4^2 \Rightarrow r = 3 \text{ cm} \dots\dots\dots 1 \text{ pikë}$$

$$V = \frac{1}{3} BH = \frac{1}{3} r^2 \pi H = 12\pi \text{ cm}^3 \dots\dots\dots 1 \text{ pikë}$$

$$S = r\pi(r + s) = 24\pi \text{ cm}^2 \dots\dots\dots 1 \text{ pikë}$$

19.

$$a_1 = 3, q = 2 \dots\dots\dots 1 \text{ pikë}$$

$$\frac{3(2^n - 1)}{2 - 1} = 3069 \dots\dots\dots 1 \text{ pikë}$$

$$2^n = 1024 \dots\dots\dots 1 \text{ pikë}$$

$$n = 10 \dots\dots\dots 1 \text{ pikë}$$

20.

$$\lim_{x \rightarrow 0} \frac{x - 2025\sqrt{x}}{\sqrt{x}} = \lim_{x \rightarrow 0} \frac{\sqrt{x}(\sqrt{x} - 2025)}{\sqrt{x}}$$

ose

$$\lim_{x \rightarrow 0} \frac{x - 2025\sqrt{x}}{\sqrt{x}} = \lim_{x \rightarrow 0} \frac{x - 2025\sqrt{x}}{\sqrt{x}} \cdot \frac{\sqrt{x}}{\sqrt{x}} \dots\dots\dots 1 \text{ pikë}$$

$$\lim_{x \rightarrow 0} \frac{x(\sqrt{x} - 2025)}{x} = -2025 \dots\dots\dots 1 \text{ pikë}$$