



Κελάφας

ΦΡΟΝΤΙΣΤΗΡΙΑ

ΠΡΟΑΓΩΓΙΚΕΣ ΕΞΕΤΑΣΕΙΣ Γ' ΤΑΞΗΣ

ΕΣΠΕΡΙΝΟΥ ΕΝΙΑΙΟΥ ΛΥΚΕΙΟΥ

ΤΕΤΑΡΤΗ 13 ΙΟΥΝΙΟΥ 2001

ΑΠΑΝΤΗΣΕΙΣ ΣΤΗ ΓΕΩΜΕΤΡΙΑ ΓΕΝΙΚΗΣ ΠΑΙΔΕΙΑΣ

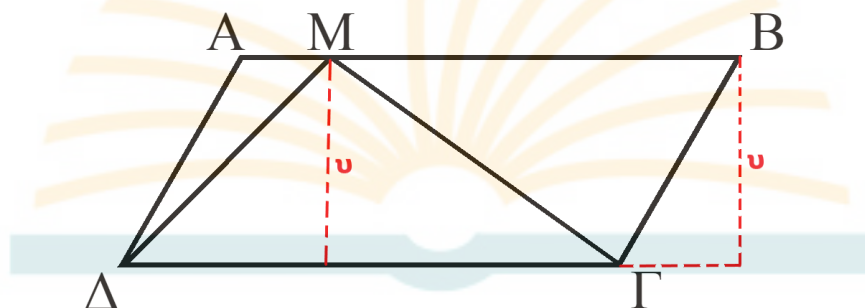
ΘΕΜΑ 1^ο

Α. 1 – Σ, 2 – Λ, 3 – Σ, 4 – Σ, 5 – Λ.

Β. α. $BD^2 = AB^2 + AD^2 = 8^2 + 6^2 = 64 + 36 = 100$, άρα $BD = 10$

β. $AB^2 = BE \cdot \Delta B \Leftrightarrow 8^2 = BE \cdot 10 \Leftrightarrow 10BE = 64 \Leftrightarrow BE = 6,4$

ΘΕΜΑ 2^ο



$$\left. \begin{aligned} \alpha. E_{M\Delta\Gamma} &= \frac{1}{2} \cdot \Delta\Gamma \cdot u = \frac{1}{2} \cdot E_{AB\Gamma\Delta} \\ E_{AM\Delta} + E_{BM\Gamma} &= E_{AB\Gamma\Delta} - E_{M\Delta\Gamma} = E_{AB\Gamma\Delta} - \frac{1}{2} \cdot E_{AB\Gamma\Delta} = \frac{1}{2} \cdot E_{AB\Gamma\Delta} \end{aligned} \right\} \Rightarrow E_{M\Delta\Gamma} = E_{AM\Delta} + E_{BM\Gamma}$$

$$\beta. E_{M\Delta\Gamma} = \frac{1}{2} \cdot E_{AB\Gamma\Delta} \Rightarrow 8 = \frac{1}{2} \cdot E_{AB\Gamma\Delta} \Rightarrow E_{AB\Gamma\Delta} = 16$$

ΘΕΜΑ 3^ο

$$\alpha. \lambda_3 = R\sqrt{3} \Rightarrow 10\sqrt{3} = R\sqrt{3} \Rightarrow R = 10$$

$$\beta. \widehat{A\Gamma B} = 240^\circ, \text{ άρα } \ell_{\widehat{A\Gamma B}} = \frac{\pi \cdot R \cdot 240^\circ}{180^\circ} = \frac{\pi \cdot 10 \cdot 4}{3} = \frac{40\pi}{3}$$

$$\gamma. \lambda_6 = R = 10$$



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ΦΡΟΝΤΙΣΤΗΡΙΑ

ΘΕΜΑ 4^ο

α. $E_{\Theta ZIH} = \Theta H \cdot A\Delta = 5 \cdot 30 = 150$

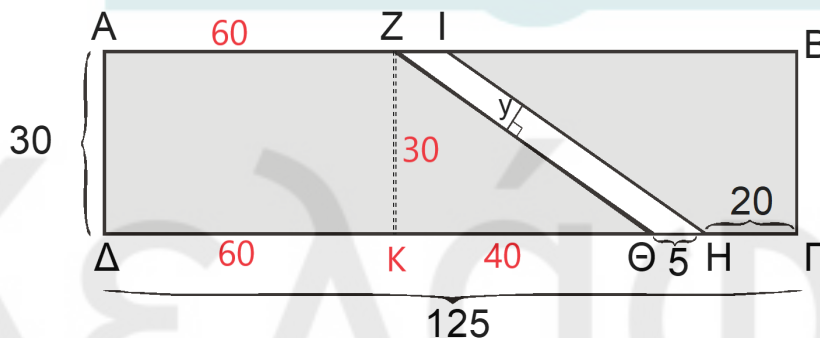
β. Είναι $IB = 120 - x$ και $\Delta\Theta = 100$

$$E_{AZ\Theta\Delta} = \frac{100 + x}{2} \cdot 30 = 15 \cdot (100 + x)$$

$$E_{B\Gamma HI} = \frac{20 + 120 - x}{2} \cdot 30 = 15 \cdot (140 - x)$$

$$E_{AZ\Theta\Delta} = 2 \cdot E_{B\Gamma HI} \Leftrightarrow 15 \cdot (100 + x) = 2 \cdot 15 \cdot (140 - x) \Leftrightarrow$$

$$100 + x = 280 - 2x \Leftrightarrow 3x = 180 \Leftrightarrow x = 60$$



γ. $\Delta K = 60$, $K\Theta = 40$ και $ZK = 30$

$$Z\Theta^2 = ZK^2 + K\Theta^2 = 30^2 + 40^2 = 900 + 1600 = 2500,$$

άρα $Z\Theta = 50$

$$E_{\Theta ZIH} = Z\Theta \cdot y \Leftrightarrow 150 = 50y \Leftrightarrow y = 3$$