

Λύσεις διαγωνίσματος φυσικής

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**Θέμα Α**

A<sub>1</sub>. Γ

A<sub>2</sub>. Γ

A<sub>3</sub>. Β

A<sub>4</sub>. Δ

A<sub>5</sub>. Δ

**Θέμα Β**

$$A. B = m \cdot g = 10 \cdot 10 = 100 \text{ N}$$

$$\Sigma F = 0 \text{ ή } T - B = 0 \text{ ή } T = B = 100 \text{ N}$$

$$B. \Sigma F_y = F_2 - F_4 = 10 - 6 = 4 \text{ N}$$

$$\Sigma F_x = F_1 - F_3 = 10 - 7 = 3 \text{ N}$$

$$\Sigma F = \sqrt{\Sigma F_x^2 + \Sigma F_y^2} = \sqrt{3^2 + 4^2} = \sqrt{9 + 16} = \sqrt{25} = 5 \text{ N}$$

$$\epsilon\phi\omega = \frac{\Sigma F_y}{\Sigma F_x} = \frac{4}{3}$$

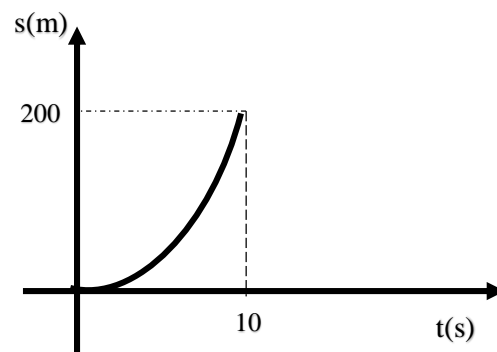
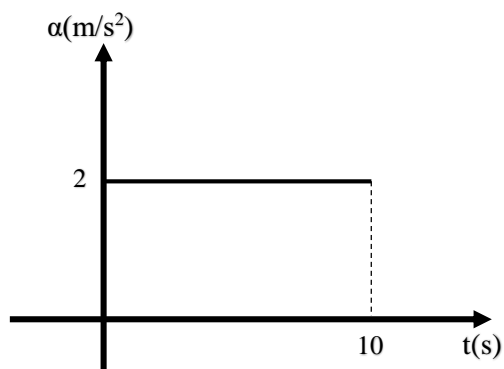
**Θέμα Γ**

α) Ε.Ο.Ε<sup>+</sup> με  $u_0$

$$\beta) \alpha = \frac{\Delta u}{\Delta t} = \frac{30-10}{10} = 2 \text{ m/s}^2$$

$$\beta) s = u_0 \cdot t + \frac{1}{2} \alpha \cdot t^2 = 10 \cdot 10 + \frac{1}{2} \cdot 2 \cdot 10^2 = 100 + 100 = 200 \text{ m}$$

γ)



**Θέμα Δ**

$$\alpha) u = u_0 - \alpha \cdot t \text{ ή } 0 = 20 - 2 \cdot t \text{ ή } 2 \cdot t = 20 \text{ ή } t = 10 \text{ s}$$

$$\beta) s = u_0 \cdot t - \frac{1}{2} \alpha \cdot t^2 \text{ ή } s = 20 \cdot 10 - \frac{1}{2} \cdot 2 \cdot 10^2 \text{ ή } s = 200 - 100 = 100 \text{ m}$$

γ)

