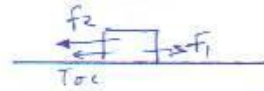


5099 pdf (ΑΠΑΝΤΗΣΗ)
ΘΕΜΑ Β

B1) A) B)
B)



Το κιβώτιο είναι ακίνητο $\Rightarrow \Sigma F = 0 \Rightarrow$
 $F_2 + T_{02} = F_1 \Rightarrow T_{02} = 1\text{N}$

B2) A) γ)
B) $\Delta K = W_F > 0$

ΘΕΜΑ Δ

A1) $v = 72 \text{ km/h} = 20 \text{ m/s}$
 $v' = v - \alpha t \Rightarrow 0 = 20 - 4\alpha \Rightarrow \alpha = 5 \text{ m/s}^2$

A2) $v' = v - \alpha t \Rightarrow v' = 20 - 2 \cdot 5 = 10 \text{ m/s}$
ήρα $K = \frac{1}{2} m v'^2 = 50000 \text{ J}$

A3) $\Sigma F = m \cdot a \Rightarrow \Sigma F = 5000 \text{ N}$

A4)
$$\left. \begin{aligned} S &= \frac{v^2}{2\alpha} \\ S' &= \frac{v'^2}{2\alpha} \end{aligned} \right\} \Rightarrow \frac{S}{S'} = \frac{v^2}{v'^2} = \frac{400}{100} = 4$$

$$S = 4 \cdot S'$$