3774 pdf (ΑΠΑΝΤΗΣΗ)

ΘΕΜΑ Β

Β1) Α) β)

Β) $h_A = \frac{1}{2} g t_A^2$, $h_B = \frac{1}{2} g t_B^2$ $\Big\}$ (:) $\Rightarrow \frac{h_A}{h_B} = \left(\frac{t_A}{t_B}\right)^2 = 4 \Rightarrow h_A = 4 h_B$

Β2) Α) α)

Β) $F_1 - mg = ma$, $mg - F_2 = ma$ $\Big\} \Rightarrow F_1 - mg = mg - F_2 \Rightarrow$

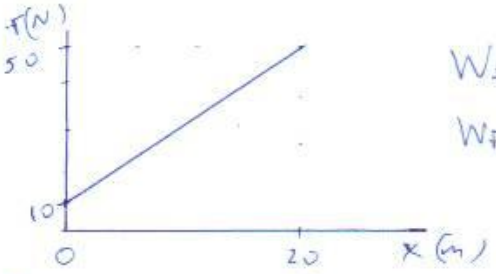
$F_1 + F_2 = 2mg$

ΘΕΜΑ Δ

Δ1) $T = \mu N = \mu mg = 8\,N$

Δ2) $\Sigma F = m \cdot a$ $\Big|_{F=30N}$ $\Rightarrow F - T = ma \Rightarrow a = 11\,m/s$

Δ3)



W_F = Εμβαδόν

$W_F = 600J$

Δ4) ΘΜΚΕ: $\Delta K \overset{0}{=} \Sigma W \Rightarrow 0 = W_F + W_T \Rightarrow$

$W_T = -W_F \Rightarrow -T \cdot x_g = -600 \Rightarrow x_g = 75m$