

Σχολίο Φυλιδίο 13/1

1) $u_0 = 0$

$F = 13\text{N}$

$s = ?$

$u = ?$

$\sigma\epsilon \Delta t = 20\text{s}$

$m = 1\text{kg}$

$F = ma \Rightarrow a = \frac{F}{m} = 13\text{m/s}^2$

$u = a \cdot t = 13 \cdot 20 = 260\text{ m/s}$

$s = \frac{1}{2} \cdot a \cdot t^2 = \frac{1}{2} \cdot 13 \cdot 400 = 13 \cdot 200 = 2600\text{ m}$

$u = u_0 + at$

2) $u = 8 \cdot t \text{ (S.I.)}$

$m = 2\text{kg}$

$\Sigma F = ?$

Εξίσωση του Δx ?

Ε.Ο.ενη.κ.
 $u_0 = 0$
 $a = 8\text{m/s}^2$

$\Sigma F = m \cdot a = 2 \cdot 8 = 16\text{N}$

$\Delta x = u_0 t + \frac{1}{2} a t^2$

$\Delta x = \frac{1}{2} 8 \cdot t^2 \Rightarrow \Delta x = 4 \cdot t^2 \text{ (S.I.)}$

3) $m = 1000\text{kg}$

$F = 4000\text{N}$

$F_{\text{αντίστροφης}} = ?$



α) $u_1 = 10\text{m/s}$ σταθερή \rightarrow 1^{ος} Ν. Νετών

$\Sigma F = 0 \Rightarrow$

$F - F_{\text{αντίστροφ.}} = 0 \Rightarrow$

$F = F_{\text{αντίστροφ.}} = 4000\text{N}$

β) $u_2 = 20\text{m/s}$ σταθερή

όπως στο α) $\Sigma F = 0 \Rightarrow F_{\text{αντίστροφ.}} = 4000\text{N}$

γ) $a = 2\text{m/s}^2$

$\Sigma F = m \cdot a \Rightarrow F - F_{\text{αντίστροφ.}} = m \cdot a \Rightarrow 4000 - F_{\text{αντίστροφ.}} = 1000 \cdot 2$

$4000 - 2000 = F_{\text{αντίστροφ.}}$

$F_{\text{αντίστροφ.}} = 2000\text{N}$