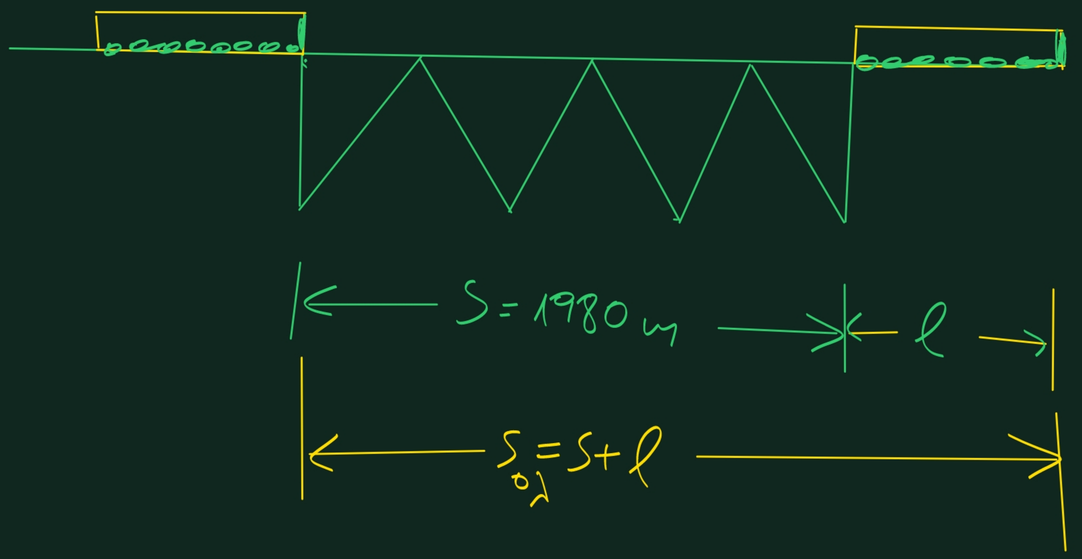
Ασκ. 2 σελ. 69



$$υ = \frac{S_{ολ}}{Δt} \Rightarrow$$

$$10 = \frac{1980 + 20}{Δt} \Rightarrow$$

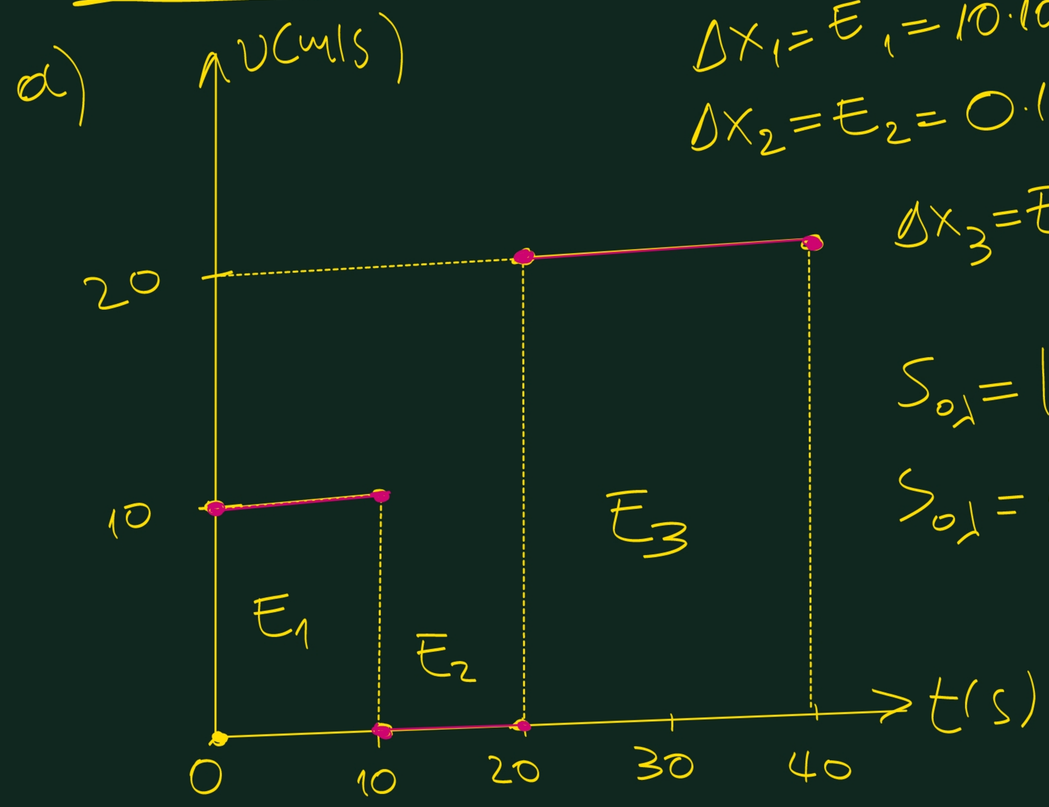
$$\frac{10}{1} = \frac{2000}{Δt} \Rightarrow$$

$$10 \cdot Δt = 2000 \Rightarrow$$

$$Δt = 200 \text{ sec}.$$

Ασκ. 3 σελ. 69.

α)



Από 0 → 10 sec.

$\Delta x_1 = E_1 = 10 \cdot 10 = 100\,m$

$\Delta x_2 = E_2 = 0 \cdot 10 = 0\,m$

$\Delta x_3 = E_3 = 20 \cdot 20 = 400\,m$

$S_{ολ} = |\Delta x_1| + |\Delta x_2| + |\Delta x_3| \Rightarrow$

$S_{ολ} = 100 + 0 + 400 = 500\,m$

β) $U_μ = \frac{S_{ολ}}{t_{ολ}} = \frac{500}{40} \Rightarrow$

$U_μ = 12,5\,m/s.$

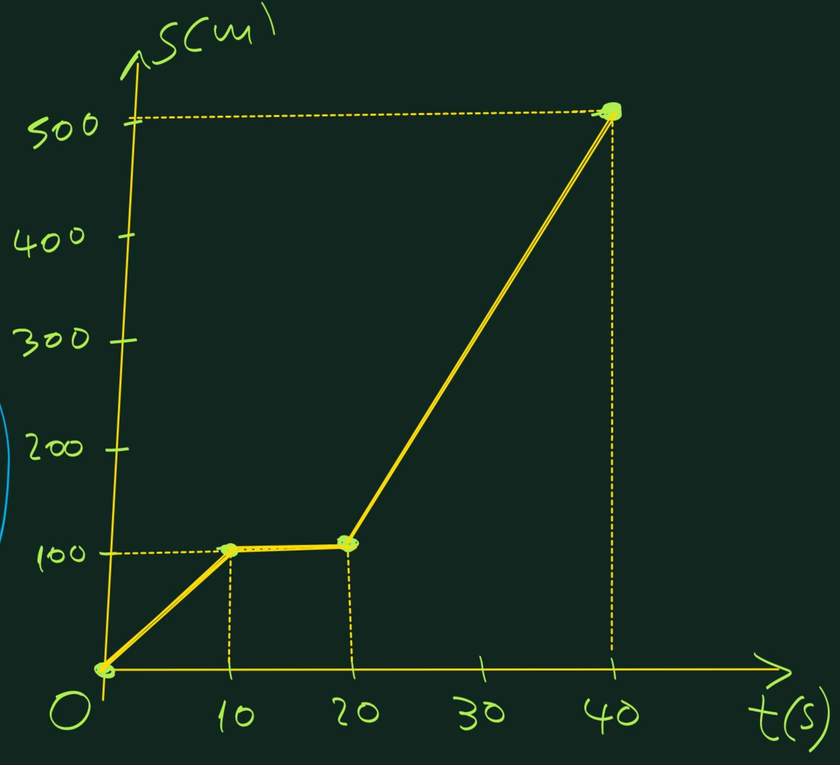
$S = υ \cdot t$ | Συνάρτηση 1ου βαθμού δηλαδή ευθεία.

γ) Από 0 → 10 sec : $S_1 = |\Delta x_1| = 100\,m.$

Από 0 → 20 sec : $S_2 = |\Delta x_1| + |\Delta x_2| = 100\,m.$

Από 0 → 40 sec

$S_{ολ} = 500\,m.$



Διάγραμμα $x-t$

$x(0)=0\ m$

$\Delta x_1 = 100\ m$

Άρα: $x(10)-x(0)=100 \Rightarrow$

$x(10)=100\ m$

$\Delta x_2 = 0\ m.$

$\Delta x_2 = x(20)-x(10) \Rightarrow$

$0 = x(20)-100 \Rightarrow$

$x(20)=100\ m.$

$\Delta x_3 = 20\cdot 20 = 400\ m.$

$\Delta x_3 = x(40)-x(20) \Rightarrow$

$400 = x(40)-100 \Rightarrow$

$x(40)=500\ m$

Άρα: $x(0)=0\ m$

$x(10)=100\ m$

$x(20)=100\ m$

$x(40)=500\ m$

Διάγραμμα θέσης - χρόνου