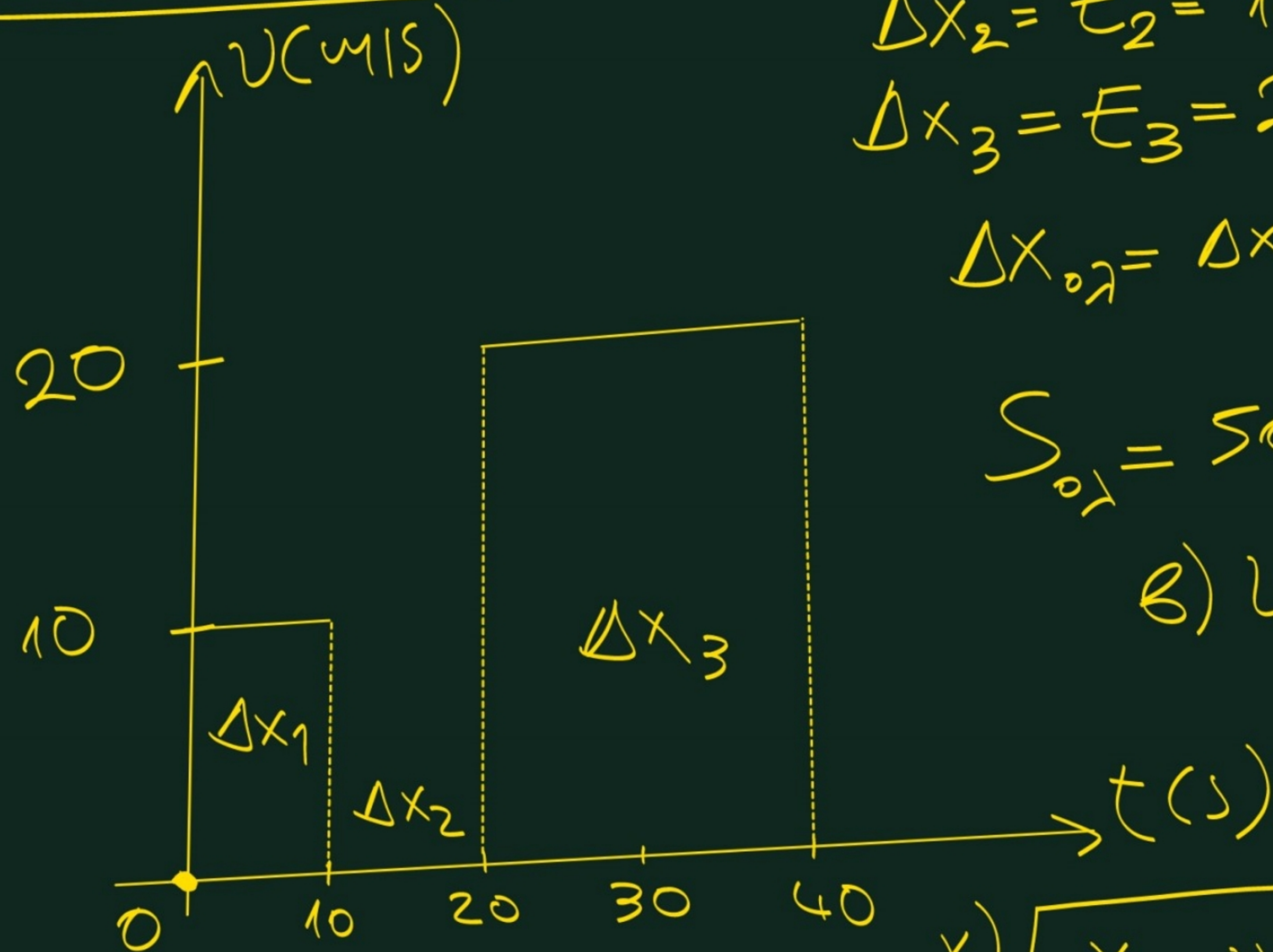


Ασκ. 3 6ε2.69.)



α) $\Delta x_1 = v_1 = 10 \cdot 10 = 100 \text{ m}$
 $\Delta x_2 = v_2 = 10 \cdot 0 = 0 \text{ m}$
 $\Delta x_3 = v_3 = 20 \cdot 20 = 400 \text{ m}$

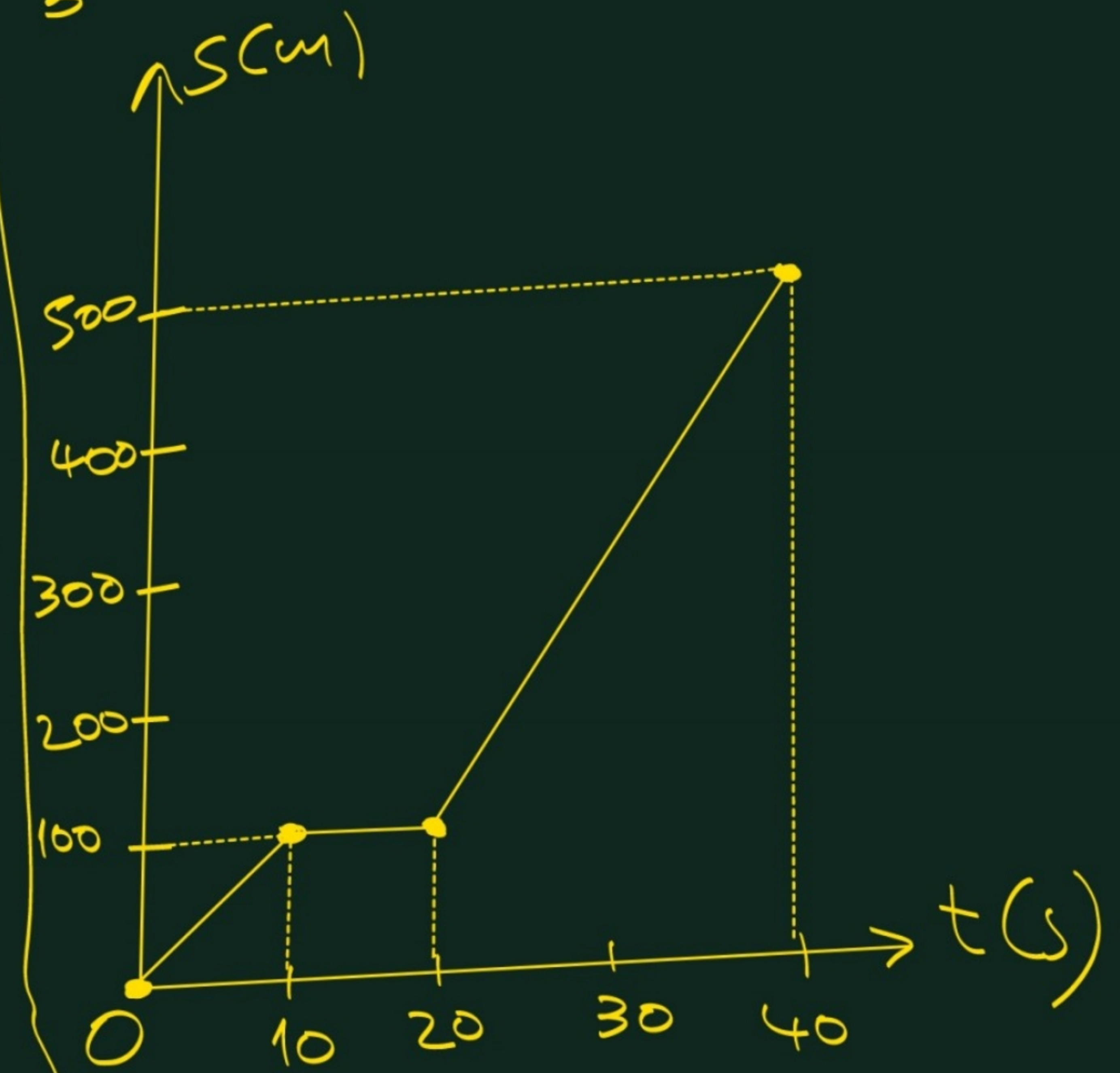
$\Delta x_{\text{ολ}} = \Delta x_1 + \Delta x_2 + \Delta x_3 = S_{\text{ολ}} \Rightarrow$

$S_{\text{ολ}} = 500 \text{ m}$

β) $v_{\gamma} = \frac{S_{\text{ολ}}}{t_{\text{ολ}}} = \frac{500}{40} = 12,5 \text{ m/s.}$

γ) $\boxed{x = v \cdot t}$ εξίσωση κίνησης
 $\boxed{s = vt}$ εξίσωση διαστήματος

$S_1 = |\Delta x_1| = 100 \text{ m}$
 $S_2 = 0 \text{ m}$
 $S_3 = |\Delta x_3| = 400 \text{ m}$



Διάγραμμα Θέσης - χρόνου

0 → 10

$$\Delta x_1 = 100 \text{ m}$$

$$x(0) = 0 \text{ m}$$

$$\Delta x_1 = x(10) - x(0) \Rightarrow$$

$$100 = x(10) - 0 \Rightarrow$$

$$x(10) = 100 \text{ m}$$

10 → 20

$$\Delta x_2 = 0 \text{ m}$$

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

$$0 = x(20) - 100 \Rightarrow x(20) = 100 \text{ m}$$

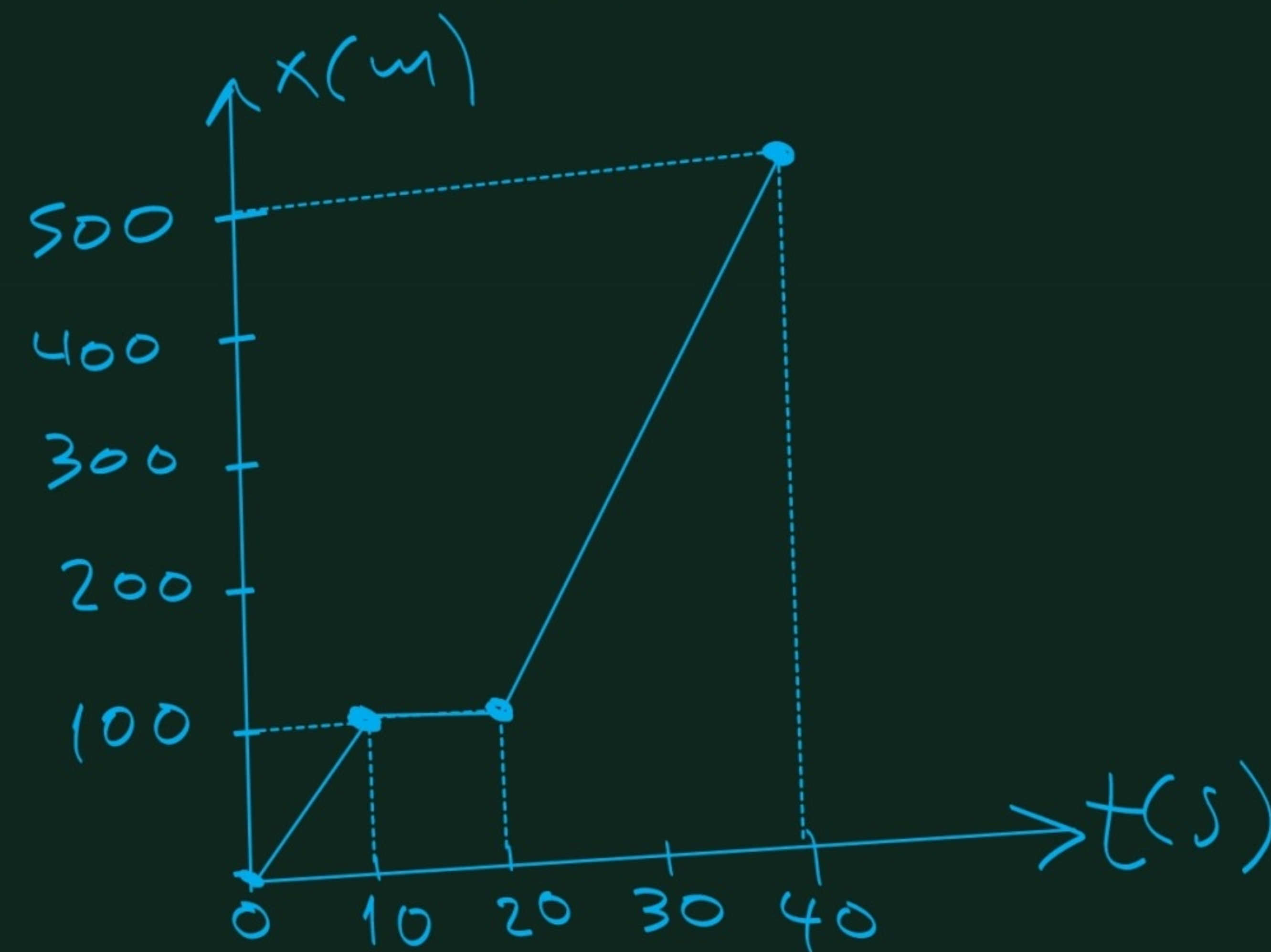
20 → 40 sec

$$\Delta x_3 = 400 \text{ m}$$

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

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

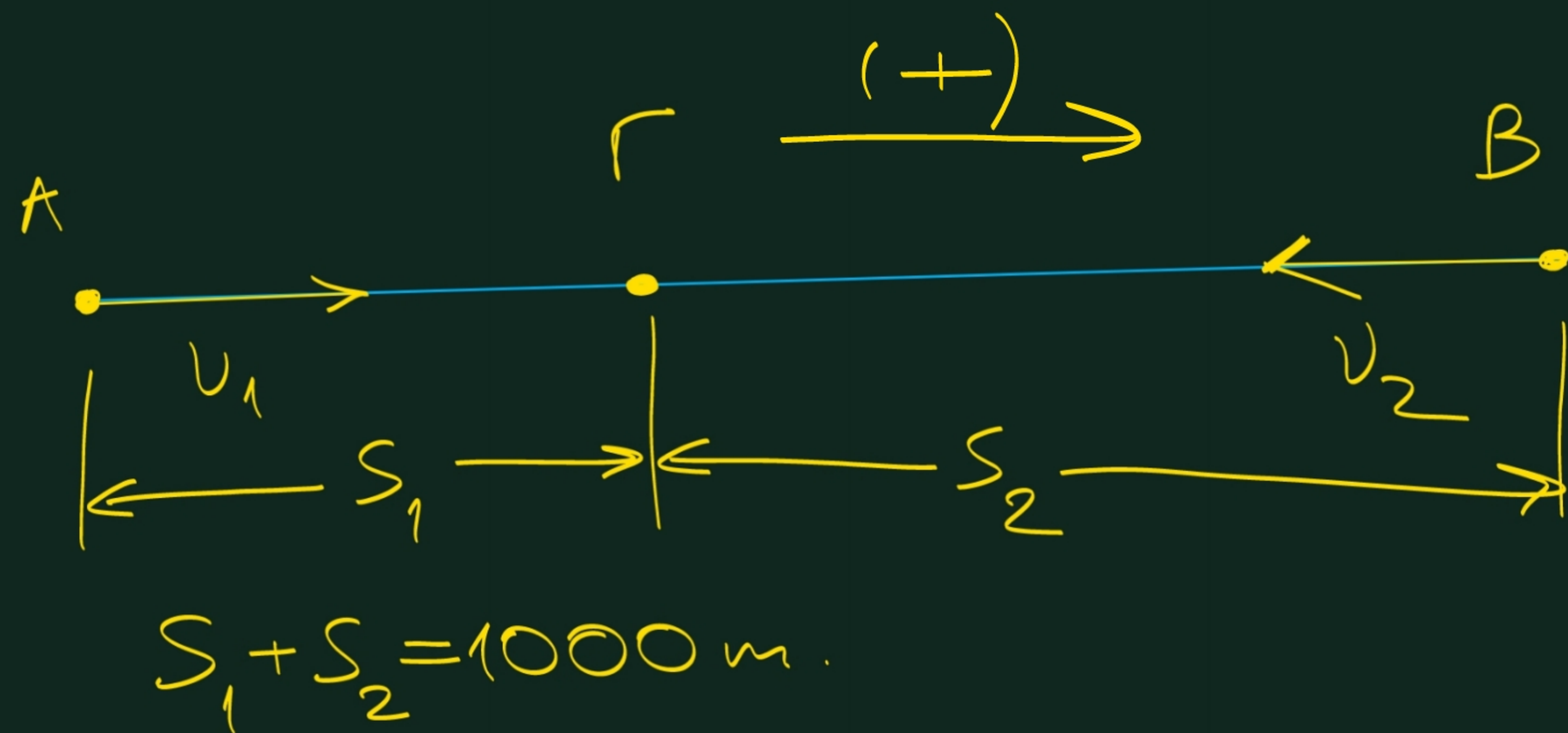
$$x(40) = 500 \text{ m}$$



Αβ. 4 εζ. 69.

$$A. v_1 = 36 \text{ km/h} = \frac{36.000 \text{ m}}{3.600 \text{ sec}} = 10 \text{ m/s.}$$

$$v_2 = 54 \text{ km/h} = \frac{54.000 \text{ m}}{3.600 \text{ sec}} = 15 \text{ m/s.}$$



$$\begin{aligned} s_1 &= v_1 \cdot t \\ s_2 &= v_2 \cdot t \end{aligned} \quad \Rightarrow \quad s_1 + s_2 = 1000 \Rightarrow$$
$$v_1 \cdot t + v_2 \cdot t = 1000 \Rightarrow$$

$$10t + 15t = 1000 \Rightarrow$$

$$\frac{25t}{25} = \frac{1000}{25} \Rightarrow t = 40 \text{ sec}$$

↑
Χρόνος συνάντησης

Συνολικό συνάντησης

$$s_1 = v_1 \cdot t = 10 \cdot 40 = 400 \text{ m}$$

$$s_2 = v_2 \cdot t = 15 \cdot 40 = 600 \text{ m}$$

