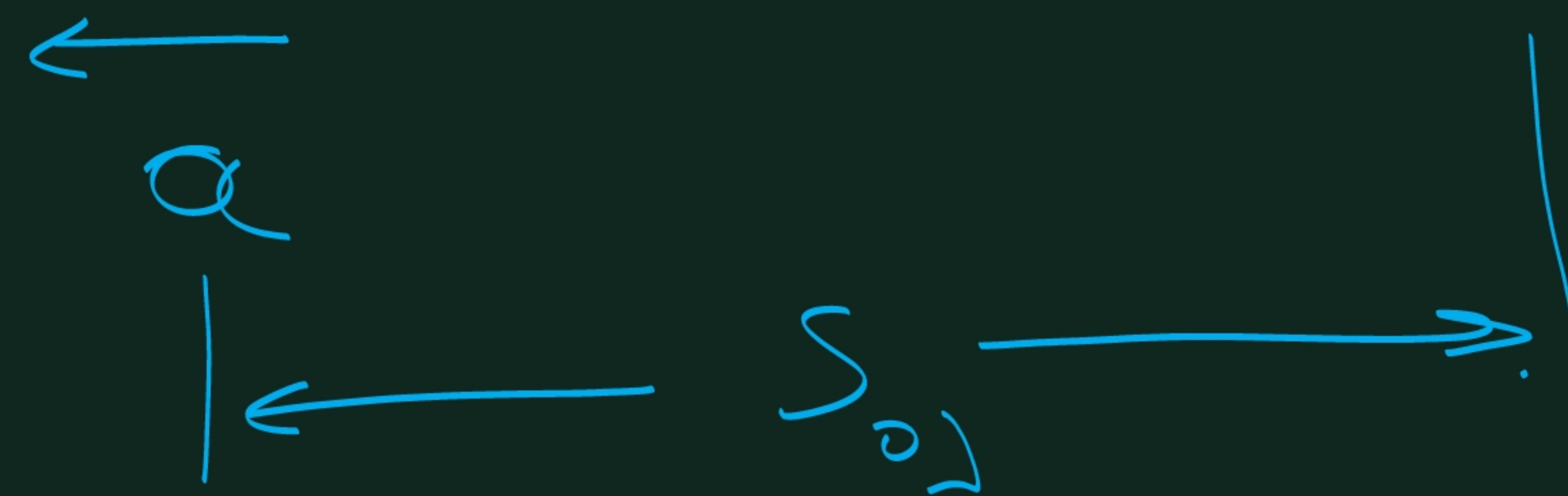


Εφαρμογή 1 σελ. 57

$$v_0 = 72 \text{ km/h} = \frac{72.000 \text{ m}}{3.600 \text{ sec}} = 20 \text{ m/s.}$$

$$a = 10 \text{ m/s}^2$$



$$S_{02} = \text{διάστημα φρενάρισης}$$

$$v = v_0 - at \Rightarrow$$

$$0 = v_0 - a \cdot t_{02} \Rightarrow$$

$$v_0 = a \cdot t_{02} \Rightarrow t_{02} = \frac{v_0}{a}$$

$$S = v_0 \cdot t - \frac{1}{2} a \cdot t^2 \Rightarrow$$

$$S_{02} = v_0 \cdot t_{02} - \frac{1}{2} a \cdot t_{02}^2 \Rightarrow$$

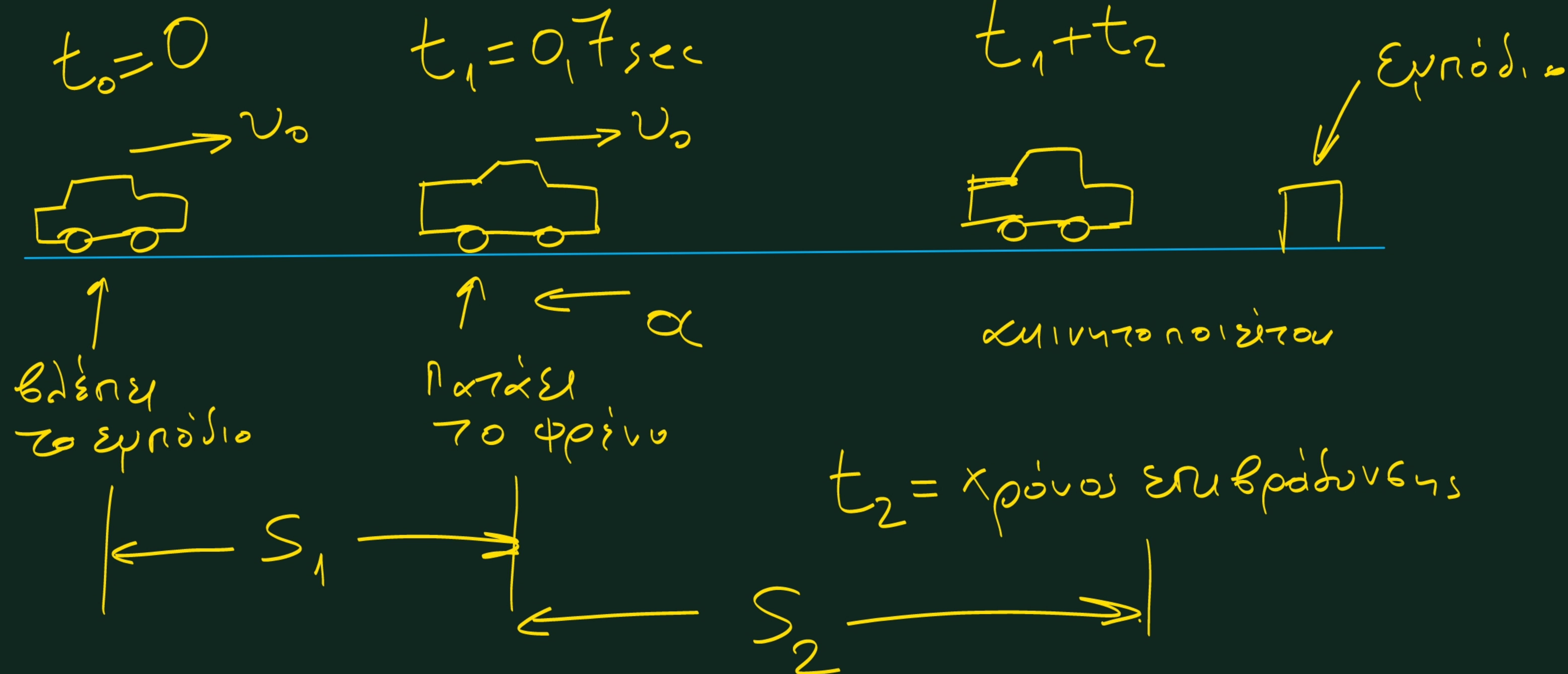
$$S_{02} = v_0 \cdot \frac{v_0}{a} - \frac{1}{2} a \cdot \left(\frac{v_0}{a} \right)^2 \Rightarrow$$

$$S_{02} = \frac{v_0^2}{a} - \frac{1}{2} \cdot \cancel{a} \cdot \frac{v_0^2}{\cancel{a^2}} \Rightarrow S_{02} = \frac{v_0^2}{a} - \frac{v_0^2}{2a} \Rightarrow$$

$$S_{02} = \frac{2v_0^2}{2a} - \frac{v_0^2}{2a} \Rightarrow \boxed{S_{02} = \frac{v_0^2}{2a}}$$

Αδμ. 13 βε2. 70

$$v_0 = 72 \text{ km/h} = 20 \text{ m/s}.$$



$$s_2 = v_0 \cdot t_2 - \frac{1}{2} a \cdot t_2^2$$

$$s_1 = v_0 \cdot t_1 \Rightarrow s_1 = 20 \cdot 0,7 \Rightarrow s_1 = 14 \text{ m}$$

$$v = v_0 - a t \Rightarrow 0 = v_0 - a \cdot t_2 \Rightarrow 0 = 20 - 10 \cdot t_2 \Rightarrow$$

$$\frac{10 t_2 = 20}{10} \Rightarrow t_2 = 2 \text{ sec}$$