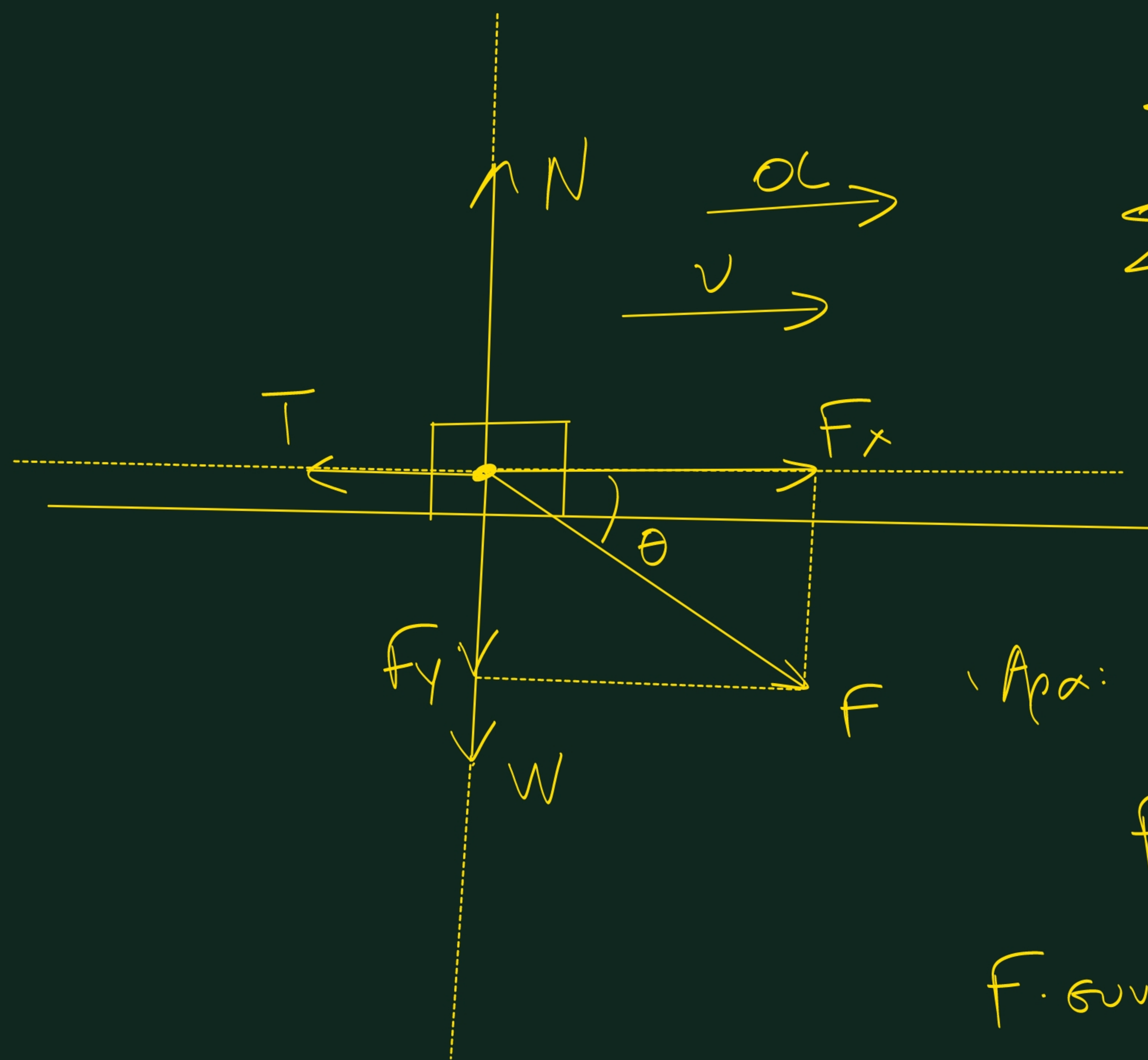




$$\Sigma F_x = ma \Rightarrow F_x - T = ma$$

$$\Sigma F_y = 0 \Rightarrow N - F_y - W = 0 \Rightarrow$$

$$N = F_y + W \Rightarrow N = F \cdot \sin \theta + mg$$

$$T = \mu N$$

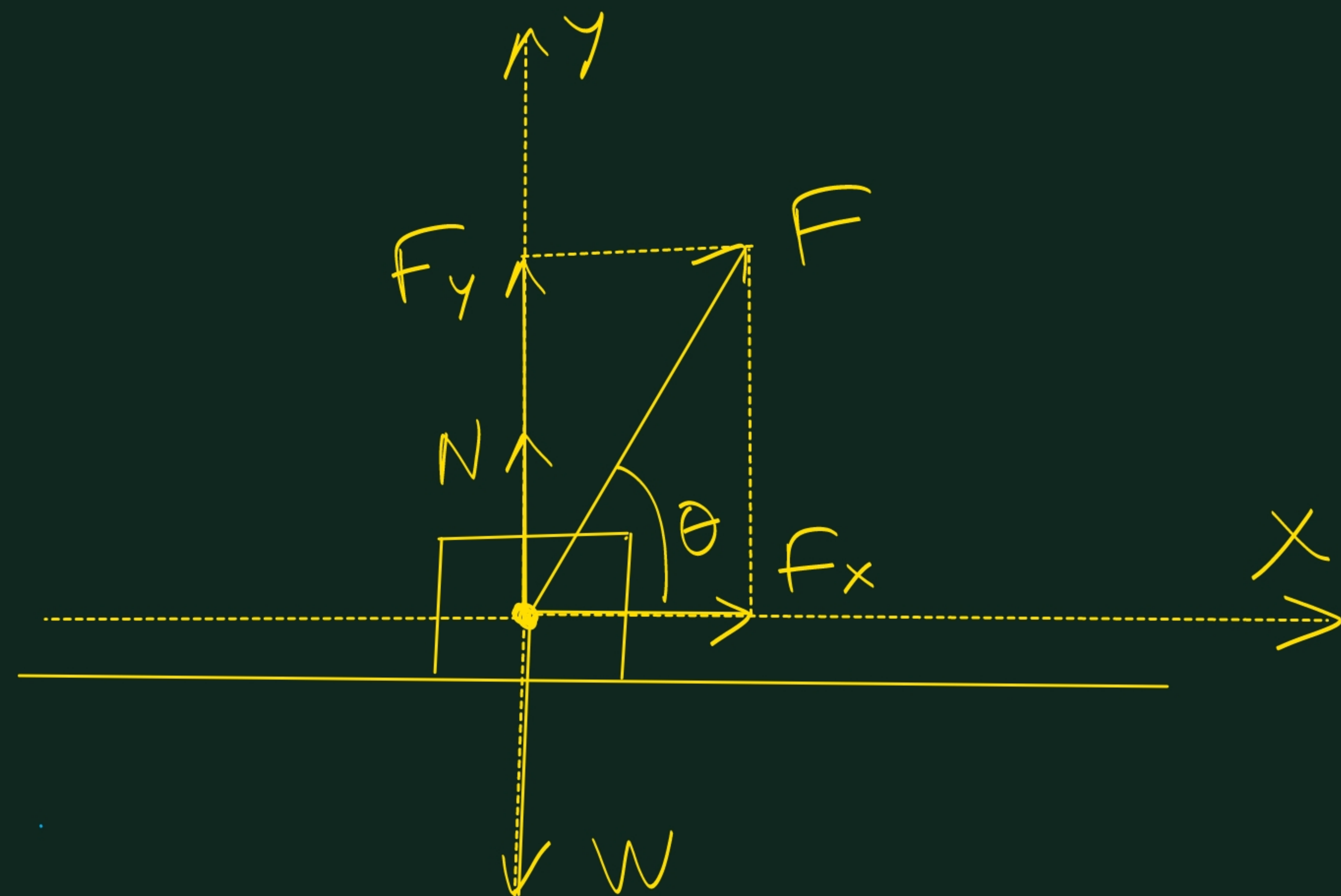
App: $F_x - T = ma \Rightarrow F \cdot \cos \theta - \mu N = ma \Rightarrow$

$$F \cdot \cos \theta - \mu (F \cdot \sin \theta + mg) = ma \Rightarrow$$

$$F \cdot \cos \theta - \mu F \cdot \sin \theta - \mu mg = ma \Rightarrow$$

$$F(\cos \theta - \mu \cdot \sin \theta) - \mu mg = ma \Rightarrow a = \dots$$

A 6u. 22 6e2.139.



$$A. \Sigma F_y = 0 \Rightarrow F_y + N - W = 0 \Rightarrow$$

$$N = W - F_y \Rightarrow$$

$$\sqrt{3} \approx 1.7$$

$$N = mg - F \cdot \sin 60^\circ \Rightarrow$$

$$20 \cdot \sqrt{3} \approx 34$$

$$N = 10 \cdot 10 - 40 \cdot \frac{\sqrt{3}}{2} \Rightarrow$$

$$N = 100 - 20 \cdot \sqrt{3} \Rightarrow N \approx 100 - 34 \Rightarrow$$

$$N = 66 \text{ N}$$

Γ.

0 → 1 → 2 → 3 → 4 → 5
1° 2° 3° 4° 5°

$$S(t) = \frac{1}{2} a \cdot t^2$$

$$S(4) = \frac{1}{2} \cdot 2 \cdot 4^2 = 16 \text{ m}$$

$$S(5) = \frac{1}{2} \cdot 2 \cdot 5^2 = 25$$

$$S(5) = 25 \text{ m}$$

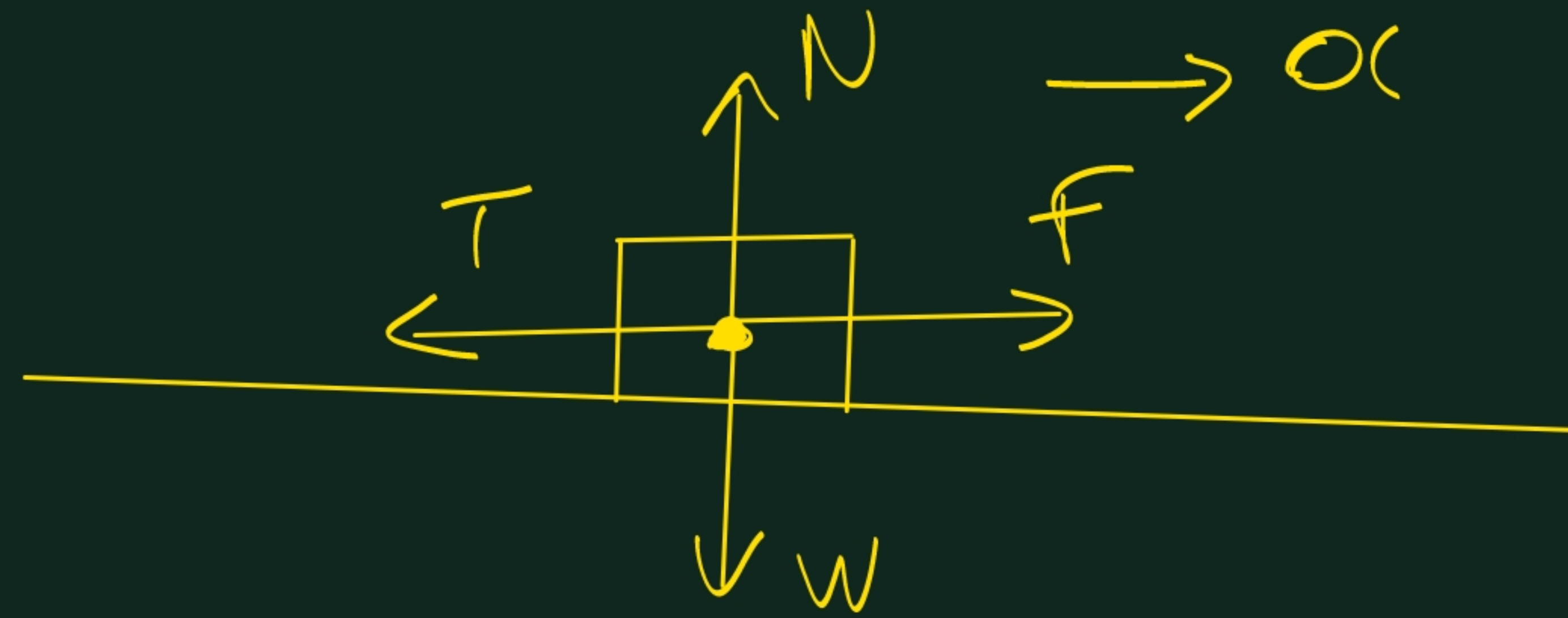
$$B. \Sigma F_x = m \cdot a \Rightarrow F_x = m \cdot a \Rightarrow F \cdot \sin \theta = m \cdot a \Rightarrow$$

$$40 \cdot \sin 60^\circ = 10 \cdot a \Rightarrow 40 \cdot \frac{1}{2} = 10 \cdot a \Rightarrow a = 2 \text{ m/s}^2$$

$$v = a \cdot t \Rightarrow v = 2 \cdot 5 \Rightarrow v = 10 \text{ m/s}$$

$$\Delta x: S = S(5) - S(4) = 25 - 16 \Rightarrow S = 9 \text{ m}$$

Ερ. 30 Σελ. 193 (αυτολόγηση)



Έστω ότι υπάρχει τριβή.

$$F - T = m \cdot \alpha \quad (1)$$

$$2F - T = m \cdot 2\alpha \quad (2)$$

αφού η τριβή γεννά σταθερή