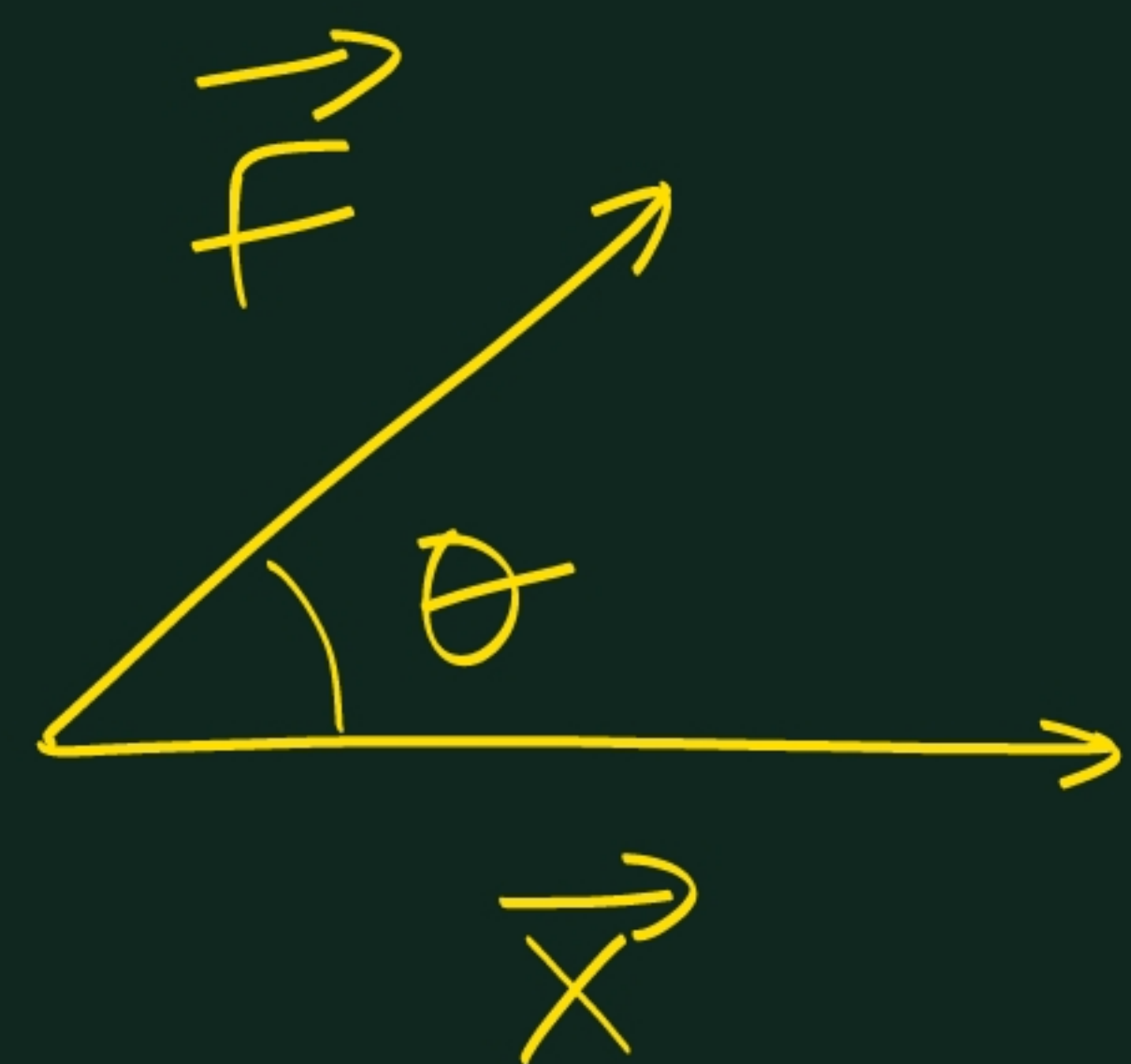
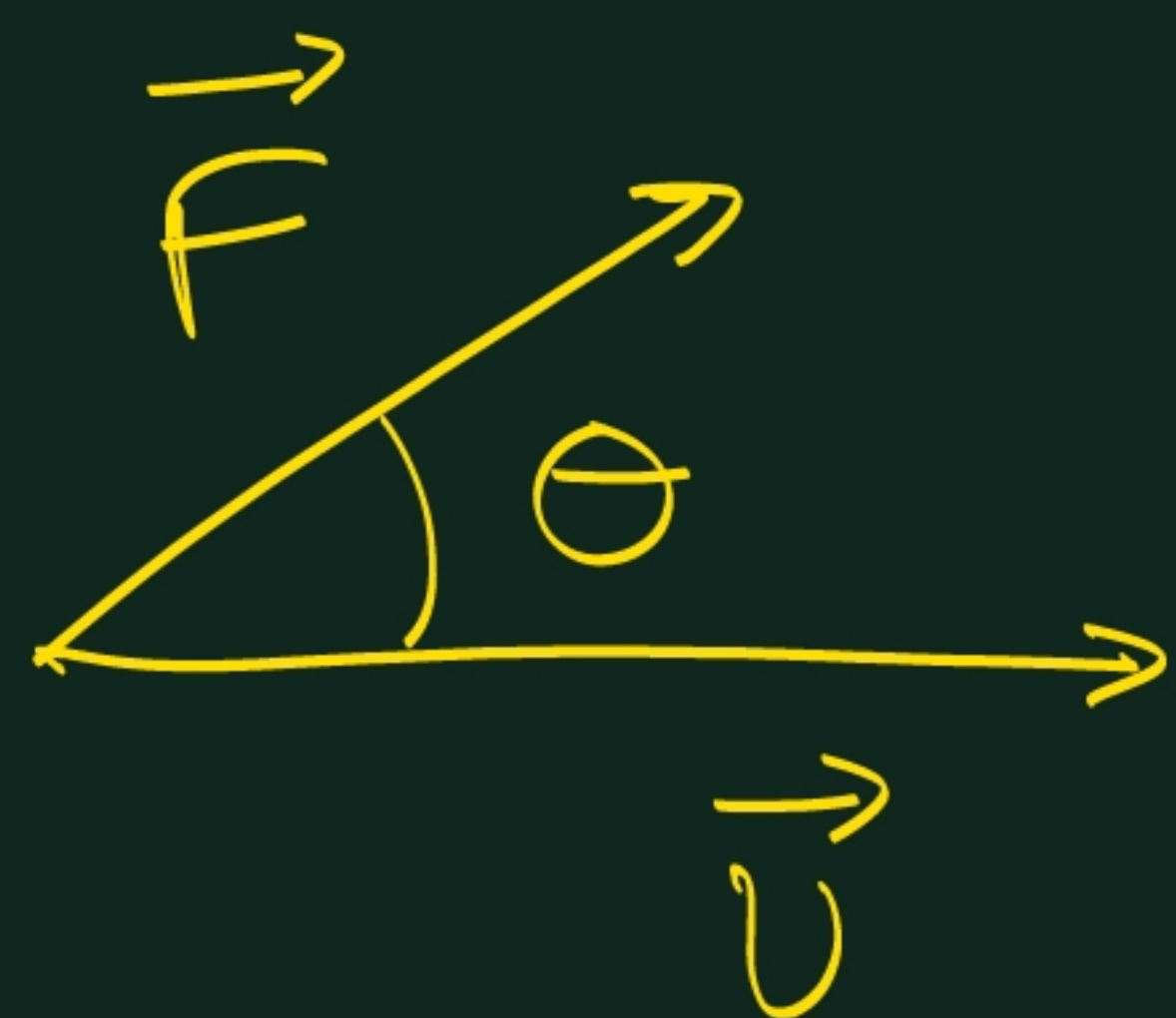


Έργο δύναμης.



$$W_F = F \cdot x \cdot \cos \theta.$$

Ισχύς δύναμης.

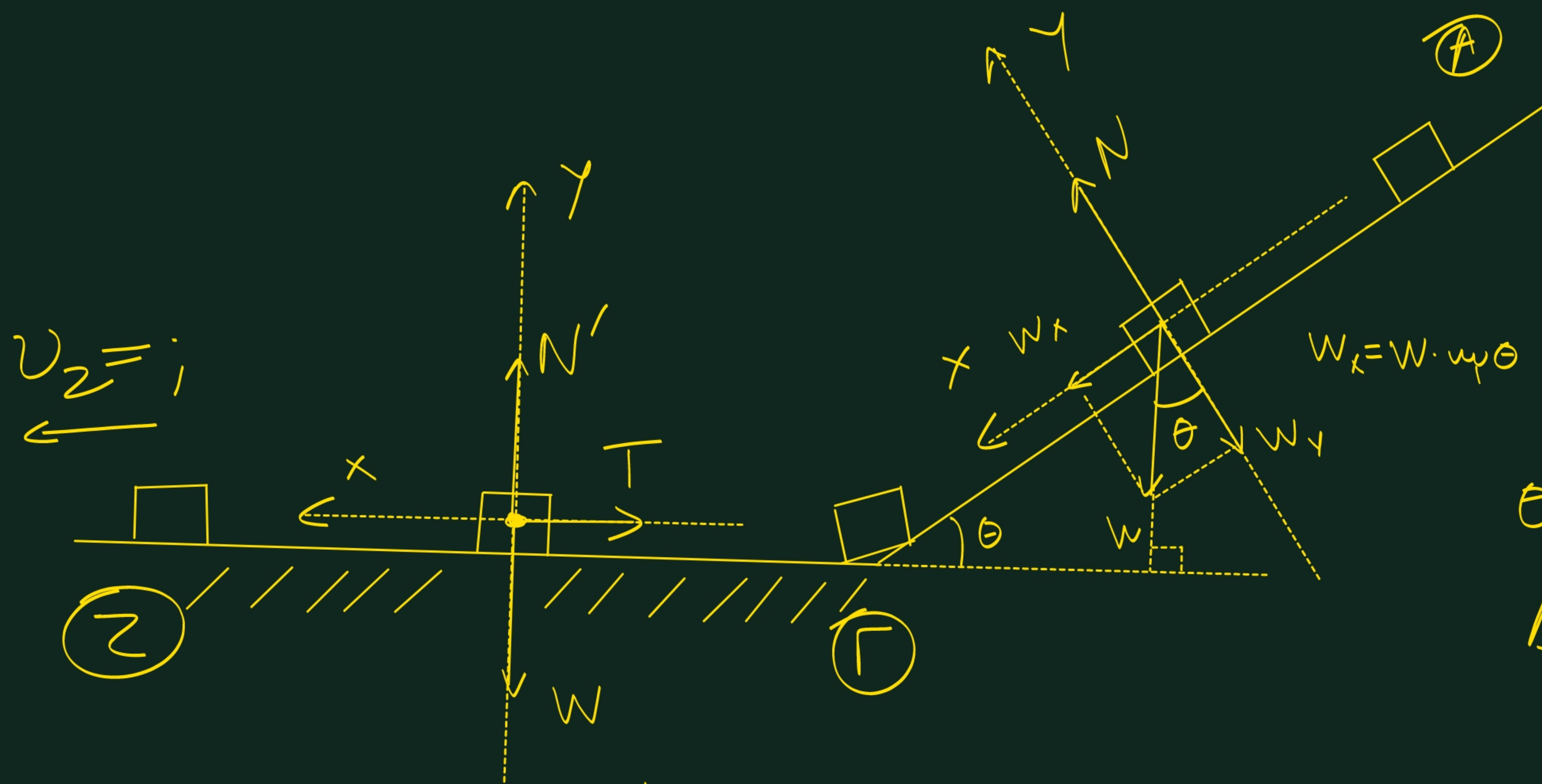


$$P_F = \frac{\Delta W_F}{\Delta t} = F \cdot v \cdot \cos \theta$$

$$P_F = \frac{\Delta W_F}{\Delta t}$$

Ισχύς = ρυθμός παραγωγής έργου.

Α6α. 6 Σεπ. 1993.



$$v_z = ;$$

$$\Sigma F_y = 0 \Rightarrow N' = W = mg.$$

$$T = \mu N' \Rightarrow T = \mu \cdot m \cdot g.$$

ΘΜΚΕ: Α → Γ:

$$\Delta K = \Sigma W \Rightarrow K_r - K_A = W_{W_x} + \cancel{W_{W_y}} + \cancel{W_N} \Rightarrow$$

$$(\vec{W}_y, \vec{N} \perp \Delta \vec{x})$$

$$K_r - 0 = W_{W_x} = W_x \cdot \Delta \Gamma \Rightarrow$$

$$K_r = m \cdot g \cdot \Delta \Gamma \cdot \mu \theta$$

ΘΜΚΕ: Γ → Ζ:

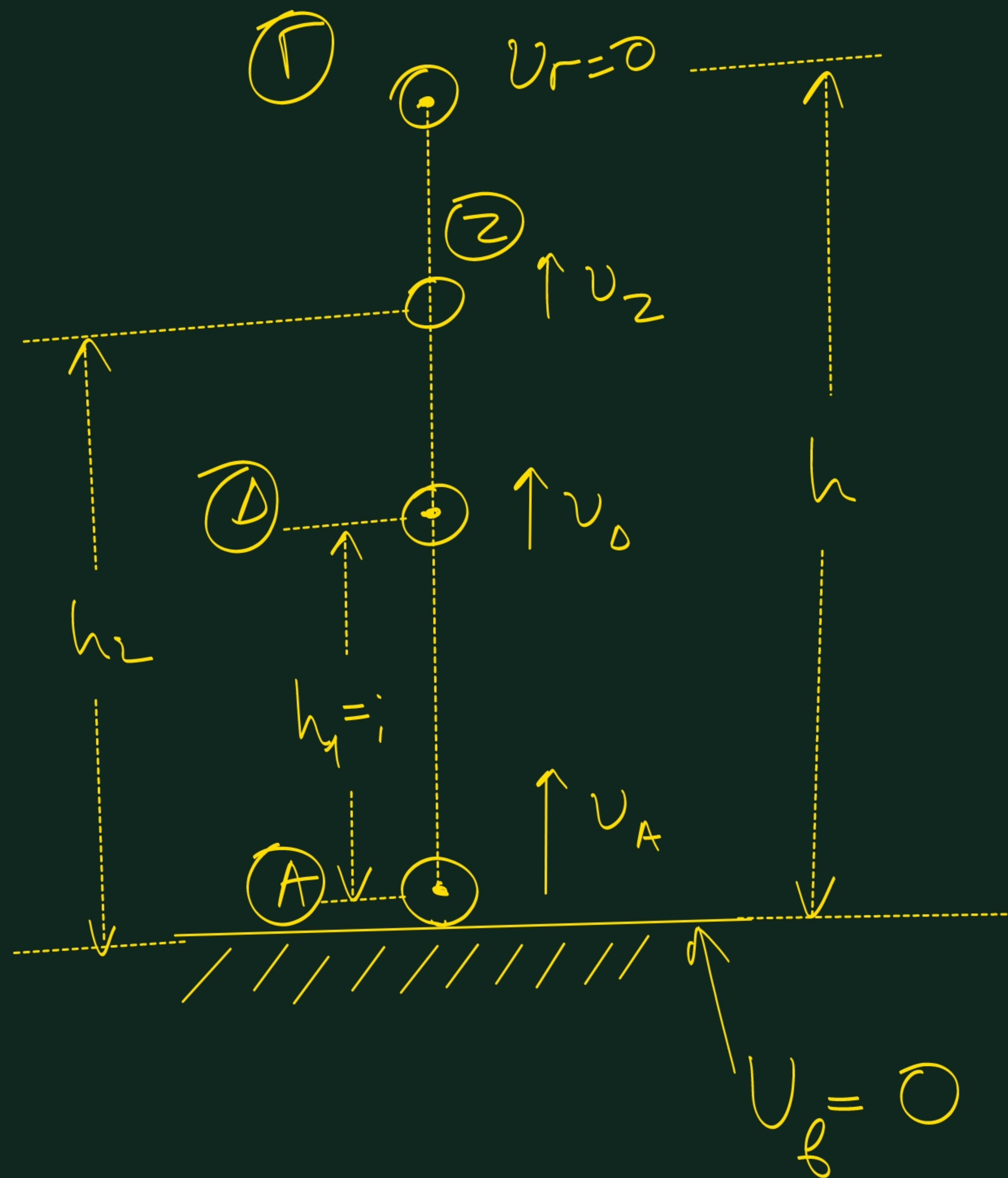
$$\Delta K = \Sigma W \Rightarrow K_z - K_r = \cancel{W_{N'}} + \cancel{W_w} + W_T \Rightarrow$$

$$(\vec{N}', \vec{w} \perp \Delta \vec{x})$$

$$K_z - m \cdot g \cdot \Delta \Gamma \cdot \mu \theta = -T \cdot \Gamma Z \Rightarrow$$

$$K_z = m \cdot g \cdot \Delta \Gamma \cdot \mu \theta - \mu \cdot m \cdot g \cdot \Gamma Z \Rightarrow$$

Αβυ. 13 Σεπ. 194.)



A. AΔME: (Α) → (Γ):

$$K_A + \cancel{U_A} = \cancel{K_\Gamma} + U_\Gamma \Rightarrow$$

$$K_A = m \cdot g \cdot h.$$

AΔE: (Α) → (Δ):

$$K_A + U_A = K_\Delta + U_\Delta =$$

$$K_A + 0 = \frac{K_A}{2} + mgh_1 =$$

$$\cancel{mgh} = \frac{\cancel{mgh}}{2} + m\cancel{g} \cdot h_1 =$$

$$h = \frac{h}{2} + h_1 \Rightarrow 40 = 20 + h_1 \Rightarrow h_1 = 20 \text{ m.}$$

B. Ορμή: $p = mv$.

$$p_2 = \frac{p_A}{2} \Rightarrow m \cdot v_2 = \frac{m \cdot v_A}{2} \Rightarrow$$

$$v_2 = \frac{v_A}{2} \Rightarrow$$

$$\frac{1}{2} m \cdot v_2^2 = \frac{1}{2} \cdot m \cdot \left(\frac{v_A}{2} \right)^2 \Rightarrow$$

$$K_2 = \frac{1}{4} \cdot \frac{1}{2} m v_A^2 \Rightarrow K_2 = \frac{1}{4} \cdot K_A \Rightarrow$$

$$K_2 = \frac{K_A}{4}$$

AΔE: (Α) → (2):

$$K_A + U_A = K_2 + U_2 \Rightarrow$$

$$K_A + 0 = \frac{K_A}{4} + mgh_2 \Rightarrow h_2 = \frac{3h}{4} \Rightarrow h_2 = 30 \text{ m}$$