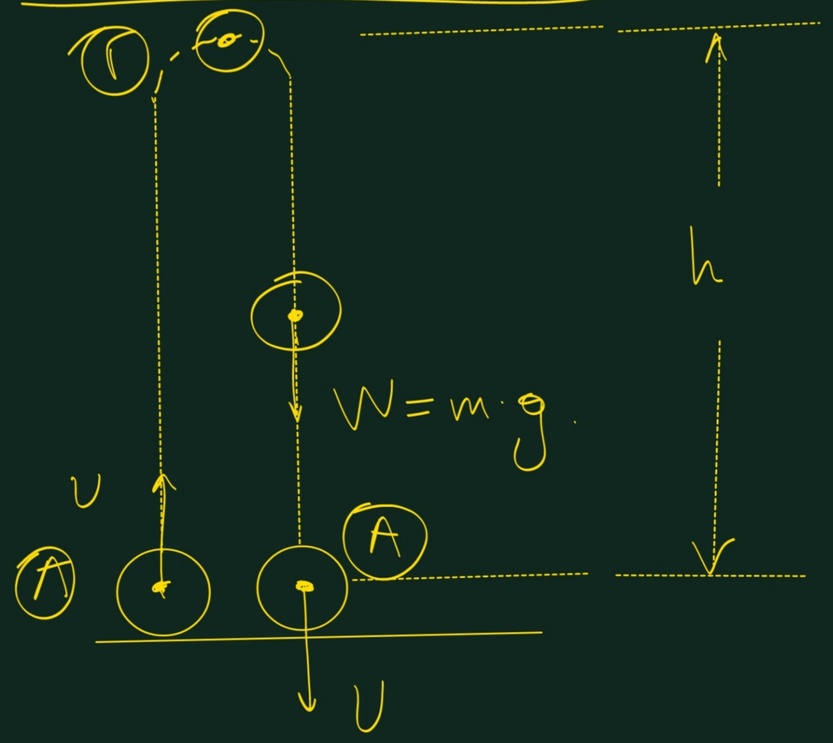
Εφαρμογή σελ. 168.



ΘΜΚΕ: Γ → Α:

$\Delta K = W_B \Rightarrow K_\Gamma - K_A = m \cdot g \cdot h \Rightarrow$

$K - 0 = m \cdot g \cdot h \Rightarrow K = 1 \cdot 10 \cdot 2 \Rightarrow K = 20$ Joule.

$K = \frac{1}{2} m \cdot \upsilon^2 \Rightarrow 20 = \frac{1}{2} \cdot 1 \cdot \upsilon^2 \Rightarrow \upsilon^2 = 40 \Rightarrow \upsilon = \sqrt{40}$ m/s.

Αν $h' = 4$ m τότε:

$K' = m \cdot g \cdot h' = 1 \cdot 10 \cdot 4 = 40$ J.

και $K' = \frac{1}{2} m \cdot \upsilon'^2 \Rightarrow 40 = \frac{1}{2} \cdot 1 \cdot \upsilon'^2 \Rightarrow \upsilon' = \sqrt{80}$ m/s.

$\frac{\upsilon'}{\upsilon} = \frac{\sqrt{80}}{\sqrt{40}} \Rightarrow \frac{\upsilon'}{\upsilon} = \sqrt{2}$

Αλλά: $\frac{K'}{K} = \frac{80}{40} \Rightarrow \frac{K'}{K} = 2$