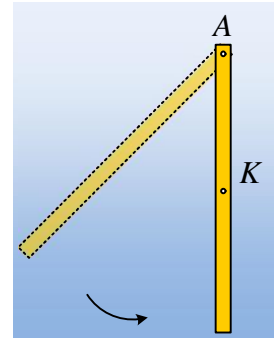


Η στροφομή και μια κρούση.

μ μ m μ =2m μ

$\omega_1 = 3 \text{ rad/s}$.



i) μ

μ

) , μ

$L = \dots$

) , μ

$L = m v_{cm} + m v_m R,$

$R = \frac{1}{2}$

μ

;

ii)

μ μ μ

μ μ $\frac{1}{2} m,$

μ μ

μ

μ ,

,

μ ,

μ

μ

:

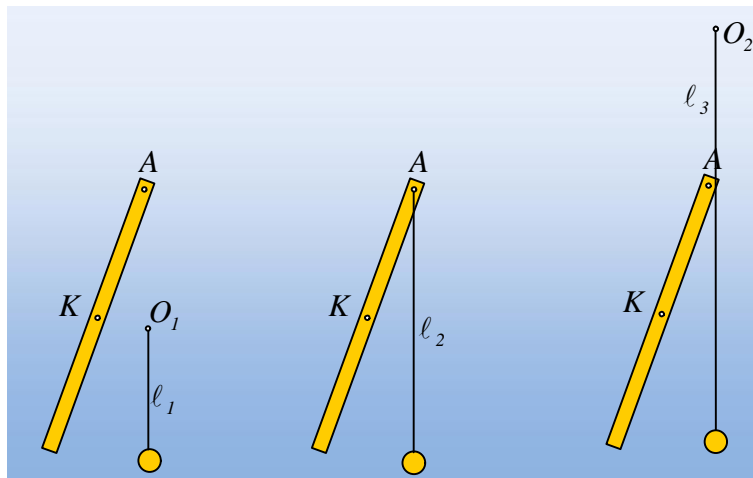
) $\omega_1 = \frac{1}{2}$

) $\omega_2 =$

) $\omega_3 = 1,5$

μ

;



iii)

μ μ

$= 3 \text{ m/s}$.

μ μ

μ μ

μ

μ

, :

) μ μ

μ .

) μ μ

μ

μ

μ .

) μ μ

μ ()

μ

.

μ

;

iv)

μ μ

μ

$= m^2 / 12$.

:

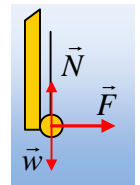
i)

Steiner, :

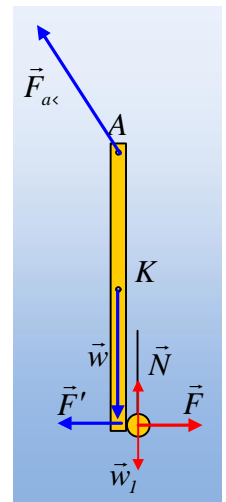
$$L_A = I_A \ddot{\theta} = (I_{cm} + md^2) \ddot{\theta} = I_{cm} \ddot{\theta} + m \frac{\ell^2}{4} \ddot{\theta} = I_{cm} \ddot{\theta} + m \left(\frac{\ell}{2} \ddot{\theta} \right) \frac{\ell}{2}$$

$$L_A = I_{cm} \ddot{\theta} + m \hat{r}_{cm}^2 \frac{\ell}{2}$$

ii)



iii))



iv)

$$L_{a..t} = L_{tv}$$

$$I_A \ddot{\theta}_1 = I_A \ddot{\theta}'_1 + m \hat{r}_1^2 \cdot \ell$$

