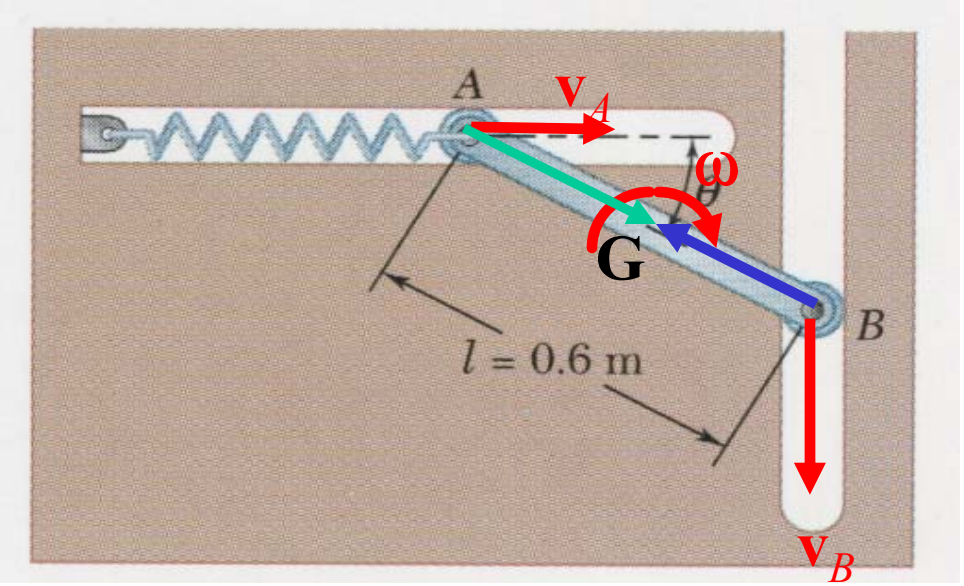

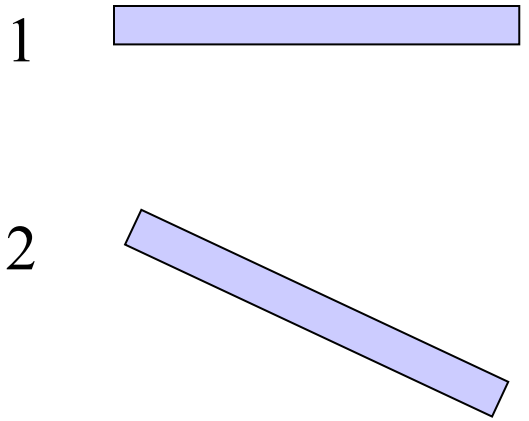

$\mathbf{v}_G = v_A\,\mathbf{i} + \boldsymbol{\omega} \times \mathbf{r}_{G/A}$

$\mathbf{v}_G = v_A\,\mathbf{i} - \omega\mathbf{k} \times r_{G/A}(\cos\theta\,\mathbf{i} - \sin\theta\,\mathbf{j})$

$v_{Gy} = -\,\omega\, r_{G/A}\cos\theta$

$\mathbf{v}_G = -\,v_B\,\mathbf{j} + \boldsymbol{\omega} \times \mathbf{r}_{G/B}$

$\mathbf{v}_G = -\,v_B\,\mathbf{j} - \omega\mathbf{k} \times r_{G/B}(-\cos\theta\,\mathbf{i} + \sin\theta\,\mathbf{j})$

$v_{Gx} = +\,\omega\, r_{G/B}\sin\theta$

$v_G = +\,\omega\,(\tfrac{1}{2}L)$

$T = \tfrac{1}{2}\, I\, \omega^2 + \tfrac{1}{2}\, m\, v_G^2$

$T = (\tfrac{1}{3}\, m\, L^2)\, \omega^2$