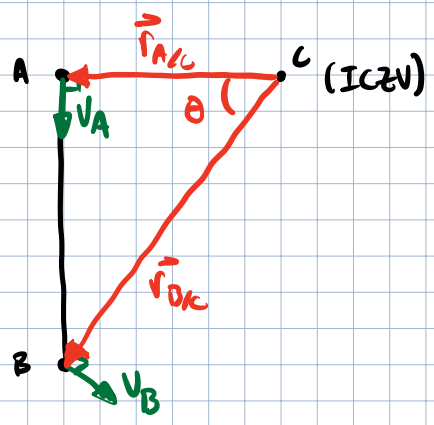
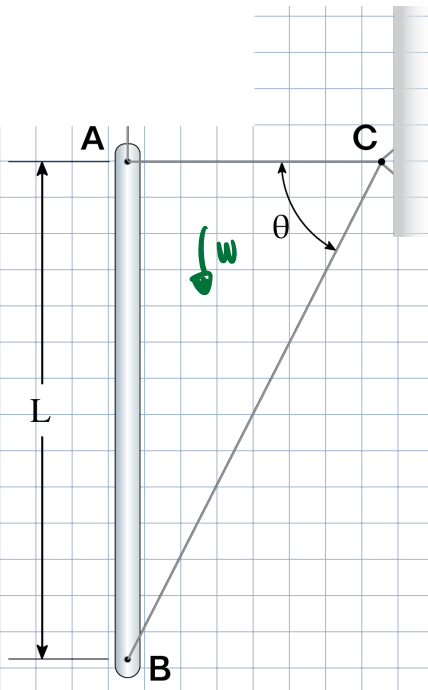
The rod is rotating with an angular velocity of $\omega = 2$ rad/s about C. If the angle $\theta = 60°$ and the length of the rod L = 1 m, find the velocities of the points A and B.





$$\vec{v}_A = \cancel{\vec{v}_C}^{\,0} + \vec{\omega} \times \vec{r}_{A/C}$$

$$\vec{v}_A = \left(2\,\frac{\text{rad}}{\text{s}}\,\hat{k}\right) \times \left(\frac{1\text{m}}{\tan 60°}\right)(-\hat{i}) = \boxed{-1.15\,\hat{j}\ \text{m/s} = \vec{v}_A}$$

$$\vec{v}_B = \cancel{\vec{v}_C}^{\,0} + \vec{\omega} \times \vec{r}_{B/C}$$

$$\vec{v}_B = \left(2\,\frac{\text{rad}}{\text{s}}\,\hat{k}\right) \times \left[\frac{1}{\tan 60°}(-\hat{i}) + (1\text{m})(-\hat{j})\right]$$

$$= (2\hat{k}) \times (-0.577\hat{i} - 1\hat{j}) = -1.154\hat{j} + 2\hat{i}\ \text{m/s}$$

$$\boxed{\vec{v}_B = 2\hat{i} - 1.154\hat{j}\ \text{m/s}}$$