

dynamics explanation

1 question A

$\vec{V}_{by} = \vec{V}_{ay} + (\omega * \vec{r_{ba}})_y$
by using the cross-product we can find that

$$(\omega * \vec{r_{ba}})_y = -3/4 * \cos(30) * 8 = -3 * \sqrt{3} \quad (1)$$

$$\vec{V}_{ay} = 0 \quad (2)$$

$$\vec{V}_{by} = -3 * \sqrt{3} \quad (3)$$