

①

$$\alpha = \frac{\omega_2 - \omega_1}{\Delta t}$$

$$\omega_2 = 80^\circ/\text{s}$$

$$200 \text{ rev} = \frac{\omega_2 - 0^\circ/\text{s}}{.4 \text{ s}}$$

(a)

② 
$$\alpha = \frac{\omega_2 - \omega_1}{\Delta t}$$

$$\alpha = \frac{2.7 \frac{\text{rad}}{\text{s}} - 3 \frac{\text{rad}}{\text{s}}}{.5 \text{ s}} = \boxed{-.6 \frac{\text{rad}}{\text{s}^2}} \text{ (b)}$$

③

$$v = \omega r$$

$$688^\circ = 12 \text{ r}$$

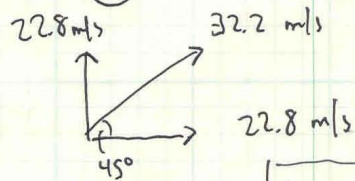
$$v = \left(12 \frac{\text{rad}}{\text{s}}\right) (.5 \text{ m}) = \boxed{6 \text{ m/s}} \text{ (b)}$$

④

$$85^\circ \times 2 \times 10 = 1700^\circ = 29.7 \text{ rads} \text{ (b)}$$

⑤ 
$$v = \omega r$$

$$v = \left(70 \frac{\text{rad}}{\text{s}}\right) (.46 \text{ m}) = 32.2 \text{ m/s}$$



$$0 = 22.8 - 9.81 t_{\text{up}} \quad \boxed{t_{\text{u}} = 4.65 \text{ s}}$$

$$9.81 t_{\text{up}} = 22.8 \quad t_{\text{up}} = \boxed{2.32 \text{ s}}$$

$$d_h = V_h \times t$$

$$d_h = 22.8 \text{ m/s} \times 4.65 \text{ s} =$$

106 m

B, No