

8. (a) We assume the sense of rotation is positive. Applying Eq. 11-12, we obtain

$$\omega = \omega_0 + \alpha t \implies \alpha = \frac{3000 - 1200}{12/60} = 9000 \text{ rev/min}^2 .$$

- (b) And Eq. 11-15 gives

$$\theta = \frac{1}{2} (\omega_0 + \omega) t = \frac{1}{2} (1200 + 3000) \left(\frac{12}{60} \right)$$

which yields $\theta = 420 \text{ rev}$.