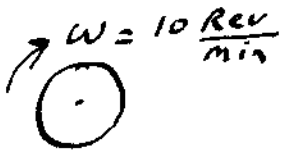


Trig

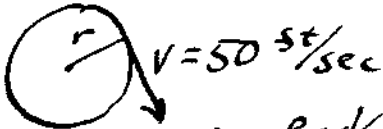


Find ω in $\frac{\text{Rad}}{\text{sec}}$

$$\omega = \frac{10 \text{ Rev}}{1 \text{ min}} \cdot \frac{2\pi}{1 \text{ Rev}} \cdot \frac{1 \text{ min}}{60 \text{ sec}}$$

$$\omega = \frac{20\pi \text{ rad}}{60 \text{ sec}} = \frac{\pi \text{ Radians}}{3 \text{ sec}}$$

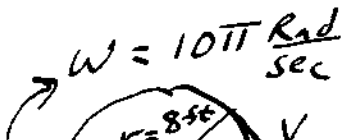
$r = 10 \text{ ft}$



Find ω in $\frac{\text{Rad}}{\text{sec}}$

$v = r\omega$ so $\omega = \frac{v}{r}$

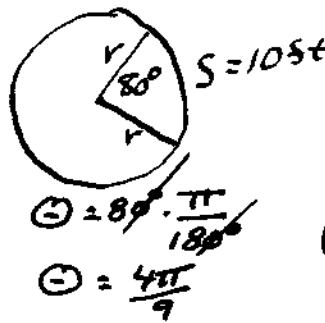
$$\omega = \frac{50 \text{ ft/sec}}{10 \text{ ft}} = \frac{5 \text{ radians}}{\text{sec}}$$



Find v

$v = r\omega$
 $= (8 \text{ ft})(10\pi \frac{\text{rad}}{\text{sec}})$

$$v = 80\pi \text{ ft/sec}$$



Find Radius

$s = r\theta$
 $r = \frac{s}{\theta} = \frac{10 \text{ ft}}{\frac{4\pi}{9}}$

$$r = \frac{90}{4\pi} \text{ ft} = 22.5 \text{ ft}$$

Solve for indicated variable

$$s = r\theta$$

$$\theta = \frac{s}{r}$$

$$r = \frac{s}{\theta}$$

$$v = r\omega$$

$$\omega = \frac{v}{r}$$

$$r = \frac{v}{\omega}$$

$$\theta = \omega t$$

$$t = \frac{\theta}{\omega}$$

$$\omega = \frac{\theta}{t}$$