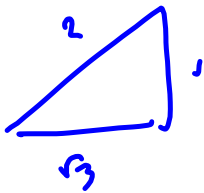


$$\left(5 \frac{\text{revs}}{\text{min}}\right) \left(\frac{2\pi \text{ radians}}{1 \text{ rev}}\right) \left(\frac{60 \text{ min}}{1 \text{ hr}}\right) = \text{angular speed.}$$

$$\text{Want } \frac{dx}{dt} \Big|_{x=1}$$



$$\frac{x}{\sqrt{3}} = \tan \theta$$

$$x = \sqrt{3} \tan \theta$$

$$\frac{dx}{dt} = \left(\sqrt{3} \sec^2 \theta\right) \left(\frac{d\theta}{dt}\right)$$

$$\begin{aligned} \frac{dx}{dt} &= \sqrt{3} \sec^2\left(\frac{\pi}{6}\right) \left(\frac{600\pi \text{ radians}}{\text{hr}}\right) \\ &= \left(\sqrt{3}\right) \left(\frac{2}{\sqrt{3}}\right)^2 (600\pi) \end{aligned}$$

$$4353.118476$$

Looks like the solutions I gave are wrong on this one! I think the above is more correct than what's presently on harryzaims.com #6.