Sec. 1
#16b $\theta = \frac{9\pi}{10}$

Supplemental want $\theta_1 + \theta_2 = 180^\circ$ OR π.

$\frac{9\pi}{10} + \theta_2 = \pi = \frac{10\pi}{10}$

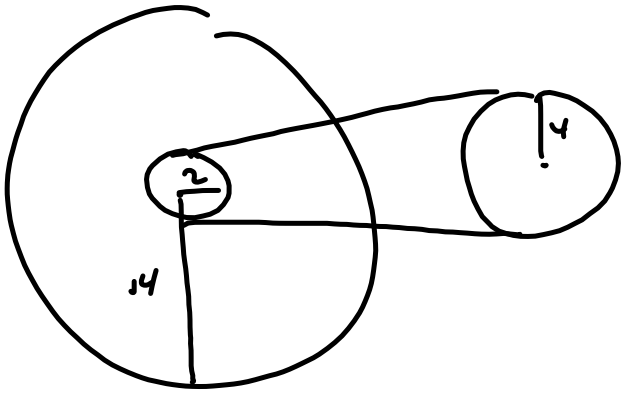
$-\frac{9\pi}{10} \qquad = -\frac{9\pi}{10}$

$\theta_2 = \frac{\pi}{10}$

Complementary? Nevah!

$\frac{9\pi}{10} > \frac{\pi}{2} = \frac{5\pi}{10}$

θ_1 & θ_2 need to be in $(0, \frac{\pi}{2})$



$S = r\theta$

$\frac{4\text{" radius front}}{2\text{" .. back}} = 2$

$\left(\frac{1 \text{ rev front}}{\text{sec}}\right)\left(\frac{2 \text{ rev back}}{1 \text{ rev front}}\right)\left(\frac{2\pi \text{ radians}}{1 \text{ rev back}}\right)(14")$

$\frac{\theta}{\text{sec}}$ $\qquad r$

$(2)(2\pi)(14)\frac{\text{inch}}{\text{sec}}\left(\frac{1 \text{ ft}}{12 \text{ inch}}\right)$

$\left(\frac{56\pi \text{ ft}}{12 \text{ sec}}\right)\left(\frac{60 \text{ mi}}{\text{hr}} \Big/ \frac{88 \text{ ft}}{\text{sec}}\right)$

$\left(\frac{56\pi}{12}\frac{\text{ft}}{\text{sec}}\right)\left(\frac{1 \text{ mi}}{5280 \text{ ft}}\right)\left(\frac{3600 \text{ sec}}{\text{hr}}\right)$

$\frac{7\text{" front}}{3\text{" rear}} = \frac{7}{3}$

$1 \text{ rev front} = (1 \text{ rev from})\left(\frac{\frac{7}{3} \text{ rev back}}{1 \text{ rev front}}\right)$