

$$\textcircled{6} \quad \text{Max} = 60 \text{ cm} \quad \text{Amp} = \frac{60-40}{2} = 10$$

$$\text{min} = 40 \text{ cm} \quad V.S = \frac{60+40}{2} = 50$$

$$\text{Per} = 3.3 - .3 = 3 \text{ sec}$$

$$y = 10 \cos\left(\frac{2\pi}{3}t - c\right) + 50 \quad 3 = \frac{2\pi}{K}$$

$$60 = 10 \cos\left(\frac{2\pi}{3}(.3) - c\right) + 50 \quad K = \frac{2\pi}{3}$$

$$10 = 10 \cos\left(\frac{.6\pi}{3} - c\right)$$

$$1 = \cos\left(\frac{.6\pi}{3} - c\right)$$

$$\cos^{-1}(1) = \frac{.6\pi}{3} - c$$

$$0 = \frac{.6\pi}{3} - c$$

$$c = \frac{.6\pi}{3} \approx .628$$

$$y = 10 \cos\left(\frac{2\pi}{3}t - .628\right) + 50$$

$$y \approx 10 \sin\left(\frac{2\pi}{3}t + .942\right) + 50$$


---

