

$$p = \frac{2\pi}{1} = 2\pi$$

$$1) \quad -2.22 = -2 - \frac{1}{4} \sin\left(\theta + \frac{2\pi}{3}\right)$$

$$\frac{-0.22}{-\frac{1}{4}} = \frac{-\frac{1}{4}}{-\frac{1}{4}} \sin\left(\theta + \frac{2\pi}{3}\right)$$

$$0.88 = \sin\left(\theta + \frac{2\pi}{3}\right)$$

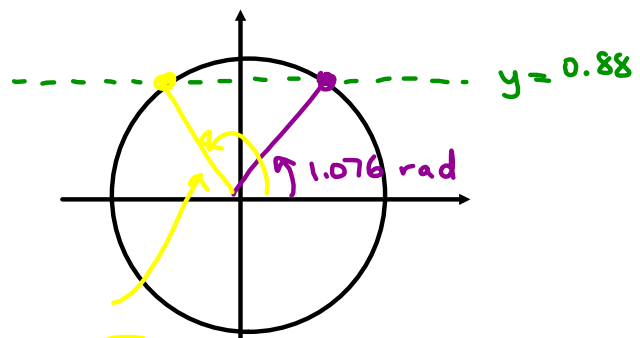
$$\sin^{-1}(0.88) = \theta + \frac{2\pi}{3}$$

$$1.076 = \theta + \frac{2\pi}{3}$$

$$\theta = -1.018$$

$$+ 2\pi$$

$$5.26$$



$$\pi - 1.076 = 2.066$$

$$2.066 = \theta + \frac{2\pi}{3}$$

$$\theta = -0.029$$

$$+ 2\pi$$

$$6.25$$

$$\theta = \{5.26, 6.25\}$$

3

:

$$\sin -3\theta = \frac{1}{2}$$

$$-3\theta = \sin^{-1}\left(\frac{1}{2}\right)$$

$$-3\theta = \frac{\pi}{6} + 2\pi n \quad -3\theta = \frac{5\pi}{6} + 2\pi n$$

$$\theta = -\frac{\pi}{18} - \frac{2\pi}{3}n \quad \theta = -\frac{5\pi}{18} - \frac{2\pi}{3}n$$

$$5) \quad 4 - 2 \sin\left(3\theta + \frac{\pi}{2}\right) = 5$$

$$-2 \sin\left(3\theta + \frac{\pi}{2}\right) = 1$$

$$\sin\left(3\theta + \frac{\pi}{2}\right) = -\frac{1}{2}$$

$$3\theta + \frac{\pi}{2} = \sin^{-1}\left(-\frac{1}{2}\right)$$

$$\frac{7\pi}{6} = 3\theta + \frac{\pi}{2}$$

$$\frac{11\pi}{6} = 3\theta + \frac{\pi}{2}$$

$$\frac{7\pi}{6} - \frac{\pi}{2} = 3\theta$$

$$\frac{11\pi}{6} - \frac{\pi}{2} = 3\theta$$

$$\frac{4\pi}{6} = 3\theta$$

$$\frac{8\pi}{6} = 3\theta$$

$$\frac{4\pi}{18} = \theta$$

$$\frac{8\pi}{18} = \theta$$

$$\frac{2\pi}{9} = \theta$$

$$\frac{4\pi}{9} = \theta$$

$$\left\{ \frac{2\pi}{9} + \frac{2\pi}{3}n, \frac{4\pi}{9} + \frac{2\pi}{3}n; n \in \mathbb{Z} \right\}$$