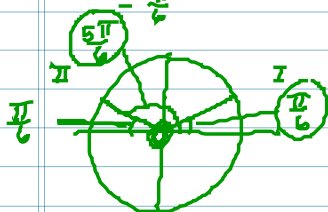
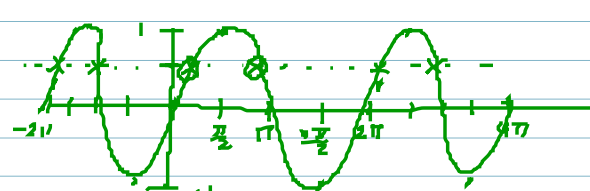
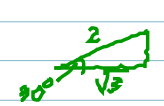


$\sin(\theta) = \frac{1}{2}$   
 $\theta = \sin^{-1}\left(\frac{1}{2}\right) \leftarrow$   
 $= \frac{\pi}{6}$

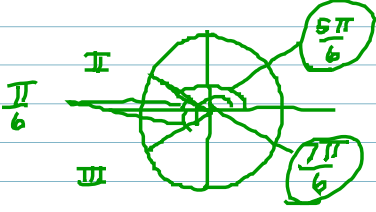


$\theta = \frac{\pi}{6} + 2\pi n, n \in \mathbb{Z}$   
 $= \frac{5\pi}{6} + 2\pi n$


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$2 \cos(\theta) + \sqrt{3} = 0$   
 $2 \cos(\theta) = -\sqrt{3}$   
 $\cos(\theta) = -\frac{\sqrt{3}}{2}$   
 $\theta = \cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$



$\theta = \frac{5\pi}{6} + 2\pi n, n \in \mathbb{Z}$   
 $= \frac{7\pi}{6} + 2\pi n$

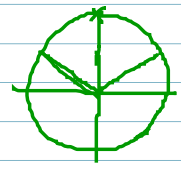
$\theta \in [0, 2\pi)$

$n=0, \left[ \frac{5\pi}{6}, \frac{7\pi}{6} \right]$

$n=1, \frac{5\pi}{6} + 2\pi \cdot \frac{6}{6} = \frac{5\pi}{6} + \frac{12\pi}{6} = \frac{17\pi}{6}$   
 $\frac{7\pi}{6} + 2\pi \cdot \frac{6}{6} = \frac{7\pi}{6} + \frac{12\pi}{6} = \frac{19\pi}{6}$

$n=-1, \frac{5\pi}{6} + 2\pi(-1) = \frac{5\pi}{6} - \frac{12\pi}{6} = -\frac{7\pi}{6}$   
 $\frac{7\pi}{6} + 2\pi(-1) = \frac{7\pi}{6} - \frac{12\pi}{6} = -\frac{5\pi}{6}$

$\frac{-13\pi}{6}, \frac{-7\pi}{6}, \frac{5\pi}{6}, \frac{17\pi}{6}, \frac{23\pi}{6}, \frac{41\pi}{6}$




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$2 \sin^2(\theta) - 3 \sin(\theta) + 1 = 0$

$2u^2 - 3u + 1 = 0$   
 $(2u-1)(u-1) = 0$   
 $u = \frac{1}{2}, 1$

$u = \sin(\theta)$

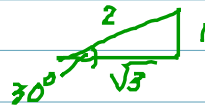
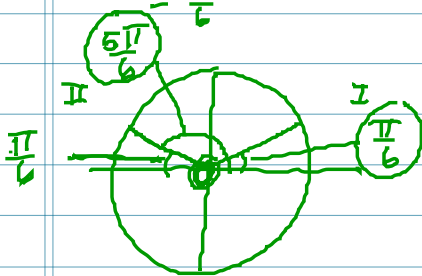
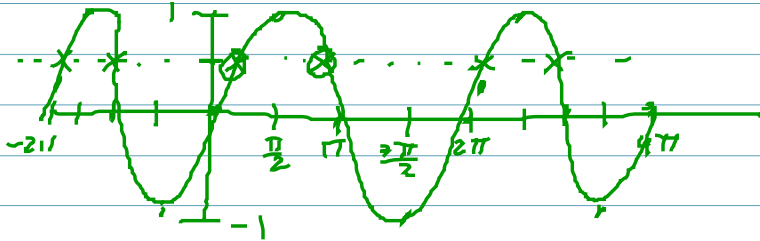
$\sin(\theta) = 1$   
 $\theta = \frac{\pi}{2} + 2\pi n$

$\sin(\theta) = \frac{1}{2}$   
 $\theta = \frac{\pi}{6} + 2\pi n, n \in \mathbb{Z}$   
 $= \frac{5\pi}{6} + 2\pi n$

$$\sin(\theta) = \frac{1}{2}$$

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

$$= \frac{\pi}{6}$$



$$\theta = \frac{\pi}{6} + 2\pi n, \quad n \in \mathbb{Z}$$

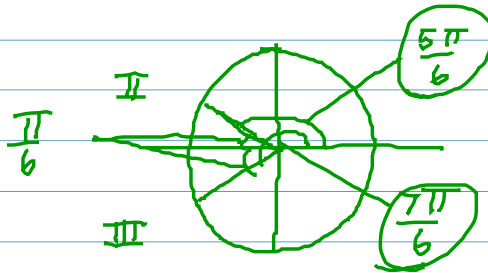
$$= \frac{5\pi}{6} + 2\pi n$$

$$2 \cos(\theta) + \sqrt{3} = 0$$

$$2 \cos(\theta) = -\sqrt{3}$$

$$\cos(\theta) = -\frac{\sqrt{3}}{2}$$

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



$$\theta = \frac{5\pi}{6} + 2\pi n, \quad n \in \mathbb{Z}$$

$$= \frac{7\pi}{6} + 2\pi n$$

$$\theta \in [0, 2\pi)$$

$$n=0, \quad \boxed{\frac{5\pi}{6}, \frac{7\pi}{6}}$$

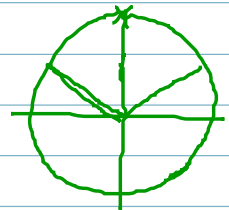
$$n=1, \quad \frac{5\pi}{6} + 2\pi \frac{6}{6} = \frac{5\pi}{6} + \frac{12\pi}{6} = \frac{17\pi}{6}$$

$$\frac{7\pi}{6} + 2\pi \frac{6}{6} = \frac{7\pi}{6} + \frac{12\pi}{6} = \frac{19\pi}{6}$$

$$n=-1, \quad \frac{5\pi}{6} + 2\pi(-1) = \frac{5\pi}{6} - \frac{12\pi}{6} = -\frac{7\pi}{6}$$

$$\frac{7\pi}{6} + 2\pi(-1) = \frac{7\pi}{6} - \frac{12\pi}{6} = -\frac{5\pi}{6}$$

$$\underline{-\frac{19\pi}{6}, -\frac{7\pi}{6}, \frac{5\pi}{6}, \frac{17\pi}{6}, \frac{29\pi}{6}, \frac{41\pi}{6}}$$



$$2 \sin^2(\theta) - 3 \sin(\theta) + 1 = 0$$

$$2u^2 - 3u + 1 = 0$$

$$(2u-1)(u-1) = 0$$

$$u = \frac{1}{2}, 1$$

$$u = \sin(\theta)$$

$$\sin(\theta) = 1$$

$$\theta = \frac{\pi}{2} + 2\pi n$$

$$\sin(\theta) = \frac{1}{2}$$

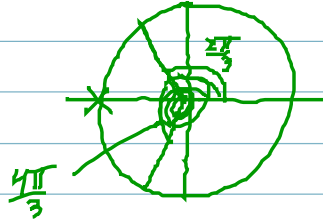
$$\theta = \frac{\pi}{6} + 2\pi n, n \in \mathbb{Z}$$

$$= \frac{5\pi}{6} + 2\pi n$$

$$\begin{aligned}
 3 \cos(\theta) + 3 &= 2 \sin^2(\theta) \\
 &= 2(1 - \cos^2(\theta)) \\
 &= 2 - 2 \cos^2(\theta)
 \end{aligned}$$

$$u = \cos(\theta)$$

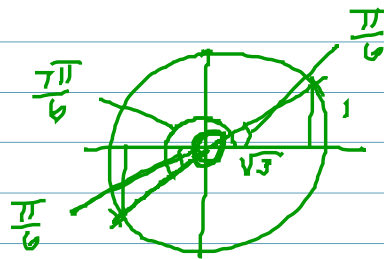
$$\begin{aligned}
 \rightarrow 2 \cos^2(\theta) + 3 \cos(\theta) + 1 &= 0 \\
 2u^2 + 3u + 1 &= \\
 (2u+1)(u+1) &= 0 \\
 u &= -\frac{1}{2}, -1
 \end{aligned}$$



$$\begin{aligned}
 \cos(\theta) &= -\frac{1}{2} \\
 \theta &= \frac{2\pi}{3} + 2\pi n \\
 &= \frac{4\pi}{3} + 2\pi n, n \in \mathbb{Z}
 \end{aligned}$$

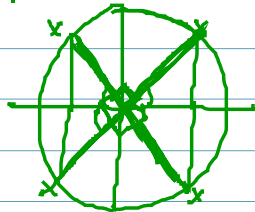
$$\begin{aligned}
 \cos(\theta) &= -1 \\
 \theta &= \pi + 2\pi n
 \end{aligned}$$

$$\begin{aligned}
 \sqrt{3} \tan(\theta) - 1 &= 0 \\
 \tan(\theta) &= \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3} \\
 \theta &= \frac{\pi}{6} + 2\pi n, n \in \mathbb{Z} \\
 &= \frac{7\pi}{6} + 2\pi n
 \end{aligned}$$



$$\theta = \frac{\pi}{6} + \pi n, n \in \mathbb{Z}$$

$$\begin{aligned}
 7 \tan^2(\theta) + 3 &= 10 \\
 \rightarrow \tan^2(\theta) &= 1 \\
 \tan(\theta) &= \pm 1
 \end{aligned}$$



$$\begin{aligned}
 \tan(\theta) &= 1 \\
 \theta &= \frac{\pi}{4} + 2\pi n \\
 &= \frac{5\pi}{4} + 2\pi n
 \end{aligned}$$

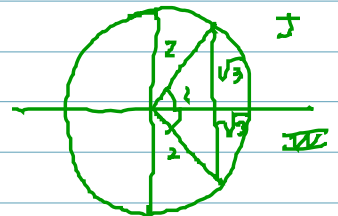
$$\begin{aligned}
 \tan(\theta) &= -1 \\
 \theta &= \frac{3\pi}{4} + 2\pi n \\
 &= \frac{7\pi}{4} + 2\pi n
 \end{aligned}$$

$$\theta = \frac{\pi}{4} + \pi n$$

$$\theta = \frac{3\pi}{4} + \pi n$$

$$\theta = \frac{\pi}{4} + \frac{\pi}{2} n, n \in \mathbb{Z}$$

$$\begin{aligned}
 3 \sec(\theta) - 10 &= -4 \\
 \sec(\theta) &= 2 \\
 \theta &= \frac{\pi}{3} + 2\pi n, n \in \mathbb{Z} \\
 &= \frac{5\pi}{3} + 2\pi n
 \end{aligned}$$



$$\begin{aligned}
 \tan(\theta) &= \cot(\theta) \\
 \tan(\theta) &= \frac{1}{\tan(\theta)} \\
 \tan^2(\theta) &= 1
 \end{aligned}$$

$$\begin{aligned}
 \tan(\theta) &= 1 \\
 \theta &= \frac{\pi}{4} + \pi n
 \end{aligned}$$

$$\begin{aligned}
 \tan(\theta) &= -1 \\
 \theta &= \frac{3\pi}{4} + \pi n
 \end{aligned}$$

$$\theta = \frac{\pi}{4} + \frac{\pi}{2} n, n \in \mathbb{Z}$$