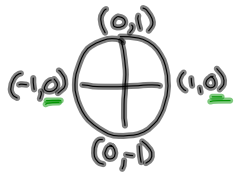
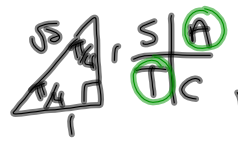


② a) $\sin \theta = \sin \theta \tan \theta$
 $0 = \sin \theta \tan \theta - \sin \theta$
 $0 = (\sin \theta)(\tan \theta - 1)$

$0 \leq \theta \leq 2\pi$
 Common factor

$\sin \theta = 0$ | $\tan \theta - 1 = 0$
 $\theta = 0, \pi, 2\pi$ | $\tan \theta = 1$
 $\theta_R = \frac{\pi}{4}$



Where is $\tan \theta$ positive

Q1	Q3
$\theta = \theta_R$	$\theta = \pi + \theta_R$
$\theta = \frac{\pi}{4}$	$\theta = \pi + \frac{\pi}{4}$
	$\theta = \frac{5\pi}{4}$

Solutions are: $0, \frac{\pi}{4}, \pi, \frac{5\pi}{4}, 2\pi$

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

$0 \leq \theta \leq 360^\circ$
 $\frac{-3}{-3} \times \frac{1}{-3} = -3$
 $\frac{-3}{-3} + \frac{1}{-3} = -2$

$3 \sin \theta + 1 = 0$ | $\sin \theta - 1 = 0$
 $\sin \theta = -\frac{1}{3}$ | $\sin \theta = 1$

$\theta_R = \sin^{-1}(\frac{1}{3})$
 $\theta_R = 19$

Unit Circle

Where is sine negative: $\frac{S}{T/C}$

Q3	Q4
$\theta = 180^\circ + \theta_R$	$\theta = 360^\circ - \theta_R$
$\theta = 180^\circ + 19$	$\theta = 360^\circ - 19$
$\theta = 199$	$\theta = 340$

$$⑤ \text{ c) } y = \frac{1}{2} \cos(\theta + \pi) - 4$$

$$a = \frac{1}{2}$$

$$b = 1$$

$$P = \frac{2\pi}{b} = \frac{2\pi}{1} = 2\pi$$

$$c = -\pi$$

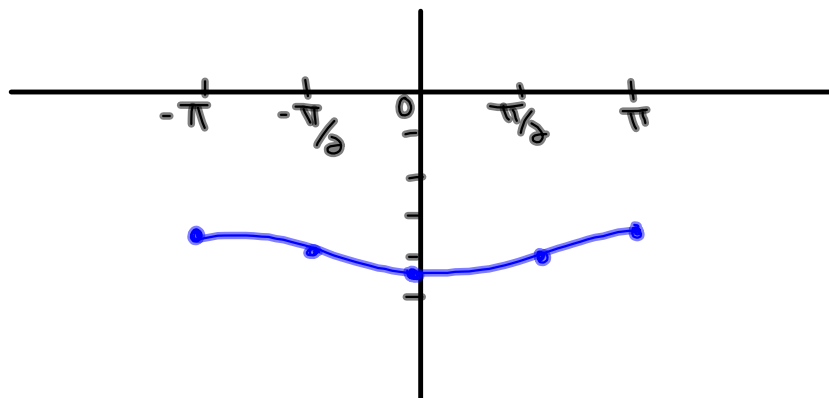
$$d = -4$$

$$(x, y) \rightarrow \left(\frac{1}{2}x - \pi, \frac{1}{2}y - 4 \right)$$

$$y = \cos \theta$$

x	y
0	1
$\frac{\pi}{2}$	0
π	-1
$\frac{3\pi}{2}$	0
2π	1

x	y
$-\pi$	$-\frac{7}{2}$ -3.5
$-\frac{\pi}{2}$	-4 -4
0	$-\frac{9}{2}$ -4.5
$\frac{\pi}{2}$	-4 -4
π	$-\frac{7}{2}$ -3.5



Finish Chapter 1 Practice Test

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