

Coterminal

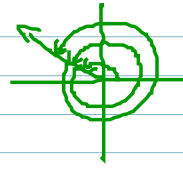
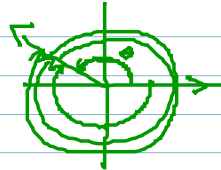
$$\theta + 360^\circ n, n \in \mathbb{Z}$$

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

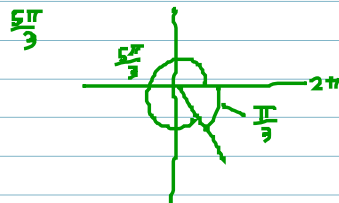
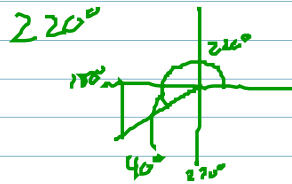
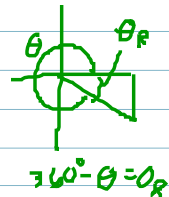
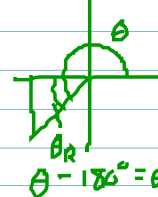
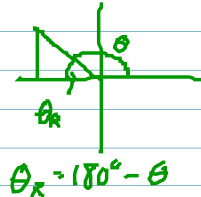
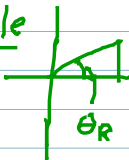
$$\frac{\pi}{3} + 2\pi \rightarrow \frac{\pi}{3} + \frac{6\pi}{3} = \frac{7\pi}{3}$$

$$\frac{\pi}{3} + 2\pi(-1) = \frac{\pi}{3} - \frac{6\pi}{3} = -\frac{5\pi}{3}$$

$$\frac{\pi}{3} + 2\pi(2) \rightarrow \frac{\pi}{3} + \frac{12\pi}{3} = \frac{13\pi}{3}$$

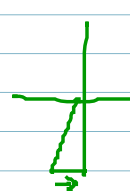
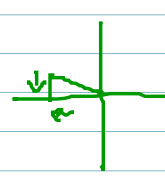
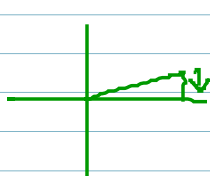


Reference Angle



Quadrantal

	$\sin(\theta)$	$\cos(\theta)$	$\tan(\theta)$	$\csc(\theta)$	$\sec(\theta)$	$\cot(\theta)$
0	0	1	0	UND	1	UND
$\frac{\pi}{2}$	1	0	UND	1	UND	0
π	0	-1	0	UND	-1	UND
$\frac{3\pi}{2}$	-1	0	UND	-1	UND	0



Coterminal

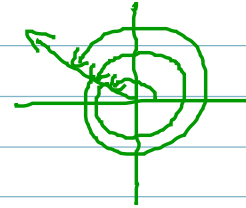
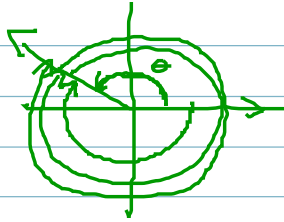
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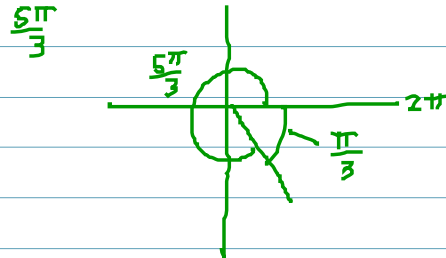
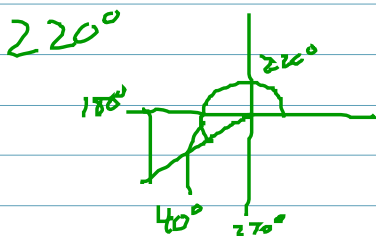
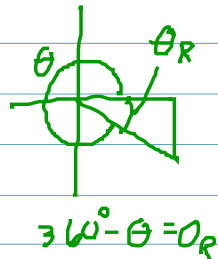
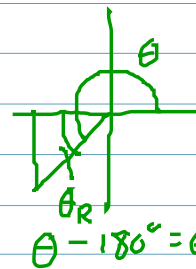
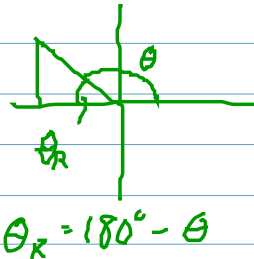
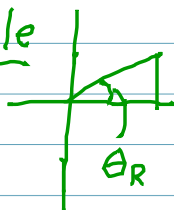
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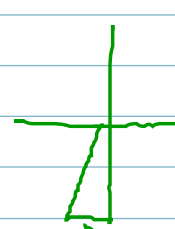
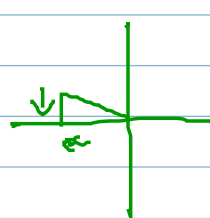
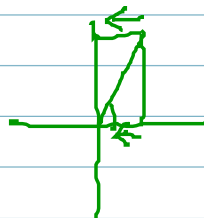


Reference Angle

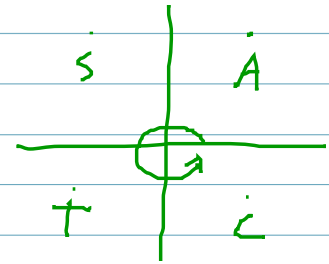


Quadrantal

		$\sin(\theta)$	$\cos(\theta)$	$\tan(\theta)$	$\csc(\theta)$	$\sec(\theta)$	$\cot(\theta)$
0	0°	0	1	0	UND	1	UND
$\frac{\pi}{2}$	90°	1	0	UND	1	UND	0
π	180°	0	-1	0	UND	-1	UND
$\frac{3\pi}{2}$	270°	-1	0	UND	-1	UND	0



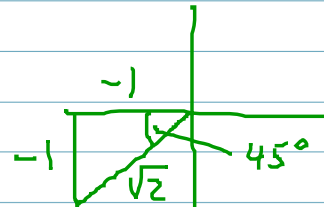
sin	All
(-, +)	(+, +)
II	I
III	IV
(-, -)	(+, -)
tan	cos
sec	sec



$$\sin(225^\circ) = -\frac{1}{\sqrt{2}} = -\frac{\sqrt{2}}{2}$$

$$\cos(225^\circ) = -\frac{1}{\sqrt{2}} = -\frac{\sqrt{2}}{2}$$

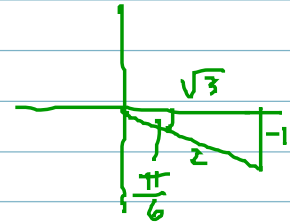
$$\tan(225^\circ) = 1$$



$$\sin\left(\frac{11\pi}{6}\right) = -\frac{1}{2}$$

$$\cos\left(\frac{11\pi}{6}\right) = \frac{\sqrt{3}}{2}$$

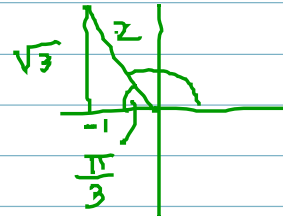
$$\tan\left(\frac{11\pi}{6}\right) = -\frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3}$$



$$\sin\left(\frac{2\pi}{3}\right) = \frac{\sqrt{3}}{2}$$

$$\cos\left(\frac{2\pi}{3}\right) = -\frac{1}{2}$$

$$\tan\left(\frac{2\pi}{3}\right) = \frac{\sqrt{3}}{-1} = -\sqrt{3}$$



$$\sin(30^\circ) = \frac{1}{2} = \frac{3}{6} = \frac{10}{20} = \frac{50}{100}$$

