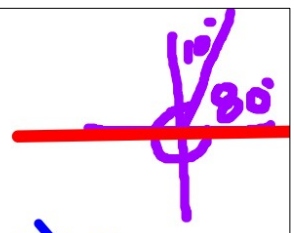


DRILL



① Find the reference angle for each:

a) $660^\circ \Rightarrow 60^\circ$

b) $-280^\circ \Rightarrow 80^\circ$

c) $\frac{13\pi}{4} \Rightarrow \frac{\pi}{4}$

d) $-\frac{23\pi}{3} \Rightarrow \frac{\pi}{3}$

② Find the sin, cos, and tan of: 240° (60°)

$$\sin 240^\circ = -\frac{\sqrt{3}}{2} \quad \cos 240^\circ = -\frac{1}{2}$$

$$\tan 240^\circ = \sqrt{3}$$

θ	0° 0	30° $\frac{\pi}{6}$	45° $\frac{\pi}{4}$	60° $\frac{\pi}{3}$	90° $\frac{\pi}{2}$
$\sin \theta$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1
$\cos \theta$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
$\tan \theta$	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	undef.
$\csc \theta$	undef.	2	$\sqrt{2}$	$\frac{2\sqrt{3}}{3}$	1
$\sec \theta$	1	$\frac{2\sqrt{3}}{3}$	$\sqrt{2}$	2	undef.
$\cot \theta$	undef.	$\sqrt{3}$	1	$\frac{\sqrt{3}}{3}$	0

Ex:

$$1) \sin 135^\circ = \sin 45^\circ = \frac{\sqrt{2}}{2}$$

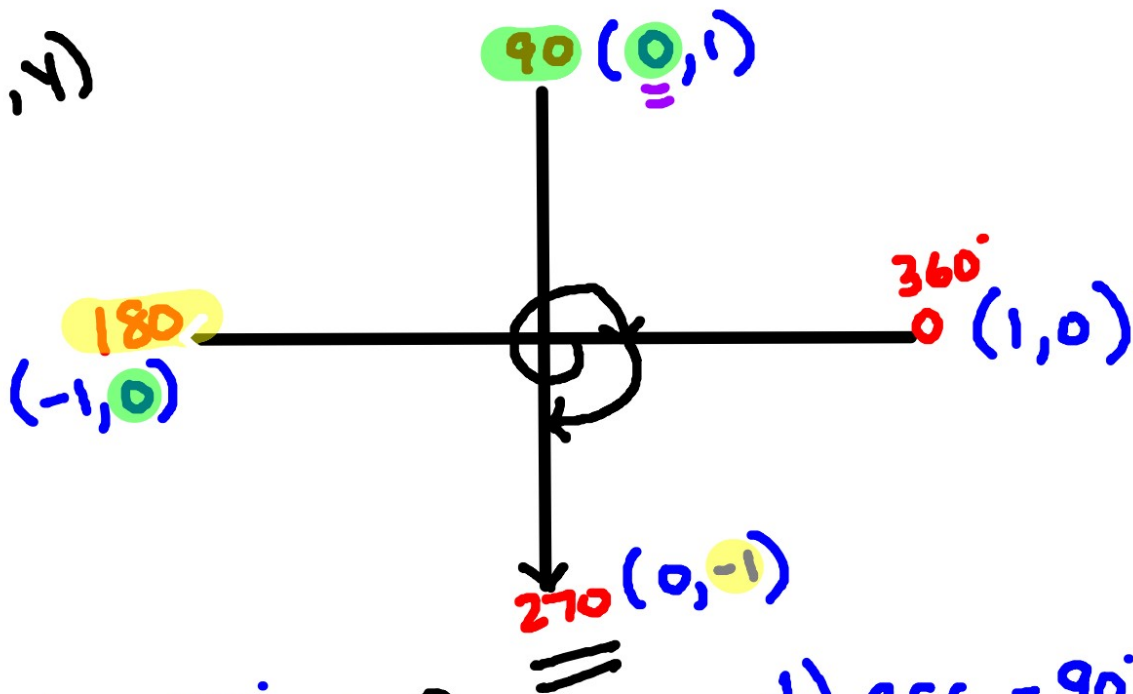
$$2) \cos -120^\circ = -\cos 60^\circ = -\frac{1}{2}$$

$$3) \tan 210^\circ = \tan 30^\circ = \frac{\sqrt{3}}{3}$$

$$4) \csc 150^\circ = \csc 30^\circ = 2$$

$$5) \cot 300^\circ = -\cot 60^\circ = -\frac{\sqrt{3}}{3}$$

(x, y)



a) $\sin 180^\circ = 0$

d) $\csc -90^\circ = -1$

b) $\cos -270^\circ = 0$

e) $\sec 810^\circ = \text{undef.}$

c) $\tan 540^\circ = \frac{0}{-1} = 0$

f) $\cot = -450^\circ = 0$