

DEGREES

| θ (Deg) | θ (Rad) | Ref Angle | $\sin \theta$ | $\cos \theta$ | $\tan \theta$ |
|-------------------|-------------------|--------------|---------------|---------------|---------------|
| 0° | | | | | |
| 30° | | | | | |
| 45° | | | | | |
| 60° | | | | | |
| 90° | | | | | |

$\sin(135^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\tan(315^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cos(300^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sin(240^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cos(330^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sin(300^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\tan(120^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cos(225^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sin(315^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cos(120^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sin(225^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\tan(225^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

RADIANS

| θ (Deg) | θ (Rad) | Ref Angle | $\sin \theta$ | $\cos \theta$ | $\tan \theta$ |
|-------------------|-------------------|--------------|---------------|---------------|---------------|
| 0° | | | | | |
| 30° | | | | | |
| 45° | | | | | |
| 60° | | | | | |
| 90° | | | | | |

$\cos\left(\frac{5\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\tan\left(\frac{3\pi}{4}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sin\left(\frac{11\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cos\left(\frac{4\pi}{3}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\tan\left(\frac{7\pi}{4}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sin\left(\frac{7\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cos\left(\frac{5\pi}{3}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\tan\left(\frac{7\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

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

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cos\left(\frac{7\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sin\left(\frac{5\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\tan\left(\frac{2\pi}{3}\right)$

Reference Angle: _____

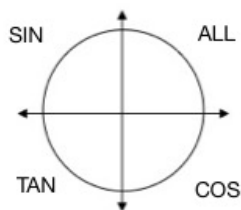
Rewrite: _____

Solution: _____

Negative Degrees and Radians

| θ (Deg) | θ (Rad) | Ref Angle | $\sin \theta$ | $\cos \theta$ | $\tan \theta$ |
|-------------------|-------------------|-----------|---------------|---------------|---------------|
| 0° | | | | | |
| 30° | | | | | |
| 45° | | | | | |
| 60° | | | | | |
| 90° | | | | | |

$$\cos(-45^\circ)$$

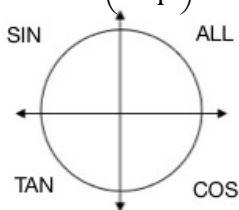


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\tan\left(-\frac{3\pi}{4}\right)$$

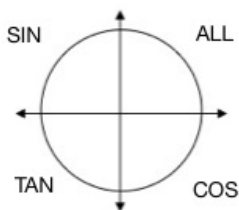


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\sin(-210^\circ)$$

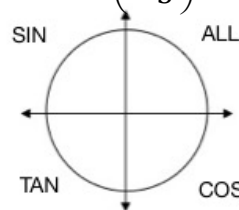


Reference Angle: _____

Rewrite: _____

Solution: _____

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

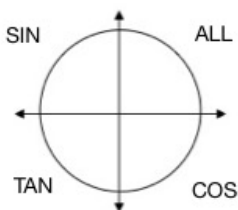


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\tan(-300^\circ)$$

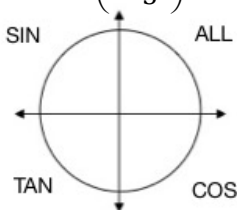


Reference Angle: _____

Rewrite: _____

Solution: _____

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

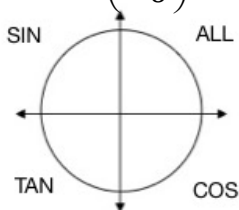


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\cos\left(-\frac{\pi}{6}\right)$$

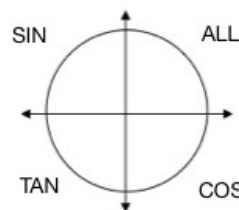


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\tan(-150^\circ)$$

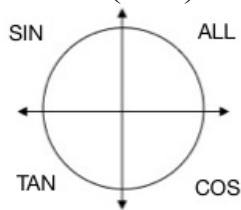


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\sin\left(-\frac{4\pi}{3}\right)$$

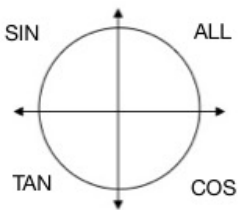


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\cos(-135^\circ)$$

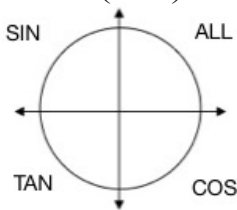


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\sin\left(-\frac{5\pi}{6}\right)$$

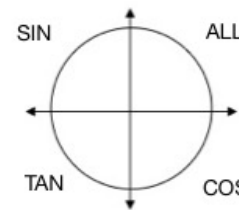


Reference Angle: _____

Rewrite: _____

Solution: _____

$$\tan(-120^\circ)$$



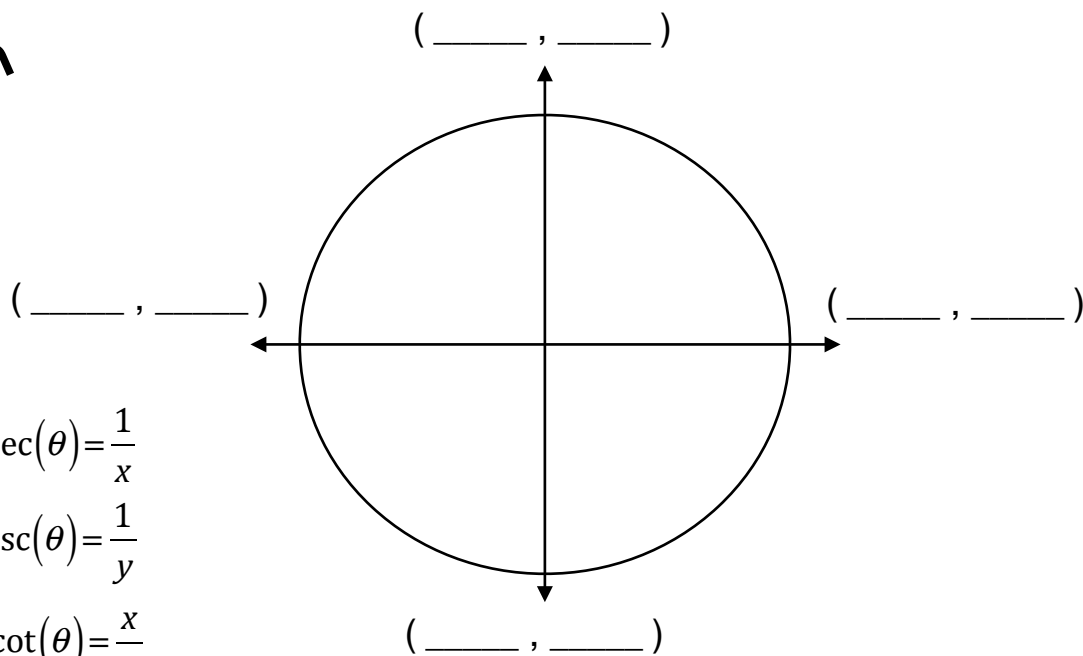
Reference Angle: _____

Rewrite: _____

Solution: _____

Angles on the Axis

$$\begin{aligned} \cos(\theta) &= x & \sec(\theta) &= \frac{1}{x} \\ \sin(\theta) &= y & \csc(\theta) &= \frac{1}{y} \\ \tan(\theta) &= \frac{y}{x} & \cot(\theta) &= \frac{x}{y} \end{aligned}$$



$\sin\left(\frac{3\pi}{2}\right) \rightarrow$ _____

$\cos(180^\circ) \rightarrow$ _____

$\tan(0^\circ) \rightarrow$ _____

$\sec(270^\circ) \rightarrow$ _____

$\csc(\pi) \rightarrow$ _____

$\cot(-\pi) \rightarrow$ _____

$\sin(90^\circ) \rightarrow$ _____

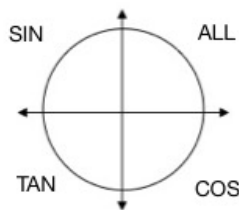
$\cos(-270^\circ) \rightarrow$ _____

$\tan\left(-\frac{\pi}{2}\right) \rightarrow$ _____

DEGREES
reciprocal
functions

| θ (Deg) | θ (Rad) | Ref Angle | $\csc\theta$ | $\sec\theta$ | $\cot\theta$ |
|-------------------|-------------------|--------------|--------------|--------------|--------------|
| 0° | | | | | |
| 30° | | | | | |
| 45° | | | | | |
| 60° | | | | | |
| 90° | | | | | |

$\csc(135^\circ)$

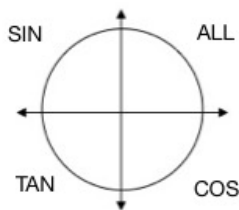


Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec(240^\circ)$

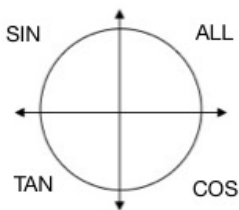


Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot(150^\circ)$

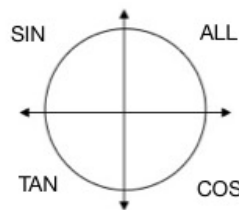


Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec(300^\circ)$

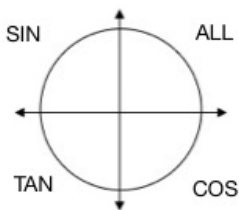


Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot(210^\circ)$

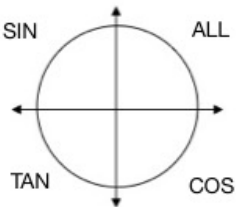


Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc(210^\circ)$

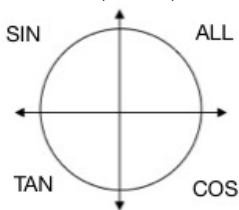


Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec(330^\circ)$

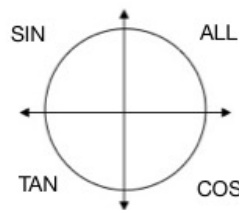


Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot(315^\circ)$

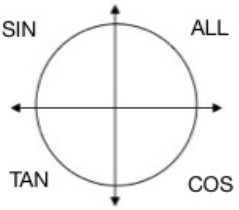


Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc(120^\circ)$

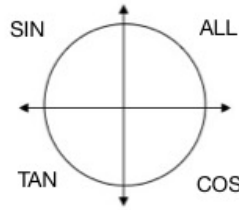


Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec(225^\circ)$

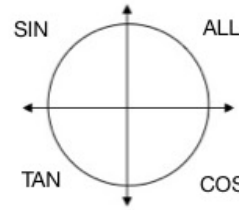


Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot(225^\circ)$

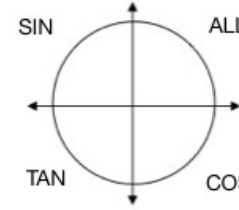


Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc(330^\circ)$



Reference Angle: _____

Rewrite: _____

Solution: _____

Radians reciprocal functions

| θ (Deg) | θ (Rad) | Ref Angle | $\csc \theta$ | $\sec \theta$ | $\cot \theta$ |
|-------------------|-------------------|--------------|---------------|---------------|---------------|
| 0° | | | | | |
| 30° | | | | | |
| 45° | | | | | |
| 60° | | | | | |
| 90° | | | | | |

$\csc\left(\frac{7\pi}{6}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec\left(\frac{5\pi}{4}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot\left(\frac{5\pi}{6}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec\left(\frac{5\pi}{3}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot\left(\frac{11\pi}{6}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc\left(\frac{4\pi}{3}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec\left(\frac{2\pi}{3}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc\left(\frac{11\pi}{6}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot\left(\frac{7\pi}{6}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec\left(\frac{5\pi}{6}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc\left(\frac{7\pi}{4}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot\left(\frac{5\pi}{4}\right)$

SIN ALL
TAN COS

Reference Angle: _____

Rewrite: _____

Solution: _____

**Negative Degrees
and Radians
reciprocal
functions**

| θ (Deg) | θ (Rad) | Ref Angle | $\csc\theta$ | $\sec\theta$ | $\cot\theta$ |
|-------------------|-------------------|--------------|--------------|--------------|--------------|
| 0° | | | | | |
| 30° | | | | | |
| 45° | | | | | |
| 60° | | | | | |
| 90° | | | | | |

$\cot(-45^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc\left(-\frac{3\pi}{4}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot(-210^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec\left(-\frac{\pi}{3}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec(-300^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc\left(-\frac{2\pi}{3}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec\left(-\frac{\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot(-150^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\csc\left(-\frac{4\pi}{3}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec(-135^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\cot(-120^\circ)$

Reference Angle: _____

Rewrite: _____

Solution: _____

$\sec\left(-\frac{5\pi}{6}\right)$

Reference Angle: _____

Rewrite: _____

Solution: _____