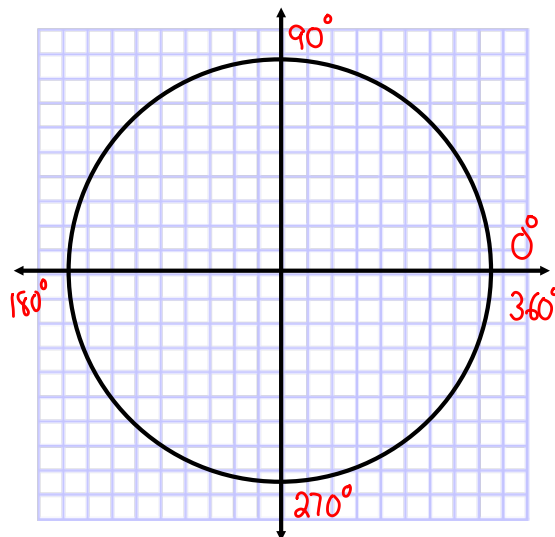


Degrees & Radians



$$360^\circ = 2\pi \text{ Radians}$$

Divide by 360

$$1^\circ = \frac{2\pi}{360} \text{ Radian}$$

$$1^\circ = \frac{\pi}{180} \text{ Radian}$$

$$360^\circ = 2\pi \text{ Radians}$$

Divide by 2

$$180^\circ = \pi \text{ Radians}$$

ex: Convert 30° to radians.

we know that

$$180^\circ = \pi \text{ radians}$$

Divide by 6

$$\frac{180^\circ}{6} = \frac{\pi}{6} \text{ Radian}$$

$$30^\circ = \frac{\pi}{6} \text{ Radian.}$$

ex: Convert $\frac{5\pi}{12}$ Radian to degrees.

we know that π Radians = 180°

Multiply both sides by $\frac{5}{12}$

$$\begin{aligned} \frac{5\pi}{12} \text{ Radians} &= \frac{5}{12} \cdot 180^\circ = \frac{5}{\cancel{2 \cdot 6}} \cdot (\overset{15}{\cancel{6}} \cdot 30^\circ) \\ &= 75^\circ \end{aligned}$$

Special angles in degrees and radians:

$$0^\circ = 0 \text{ Rad.}$$

$$30^\circ = \frac{\pi}{6} \text{ Radian}$$

$$90^\circ = \frac{\pi}{2} \text{ Radians}$$

$$45^\circ = \frac{\pi}{4} \text{ Radian}$$

$$180^\circ = \pi \text{ radians}$$

$$60^\circ = \frac{\pi}{3} \text{ Radians}$$

$$270^\circ = \frac{3\pi}{2} \text{ Radians}$$

$$360^\circ = 2\pi \text{ Radians.}$$