

Convert between degrees and radian

To find degrees given radians:

$$\text{Degrees} = \text{Radians} * \frac{180^\circ}{\pi}$$

★ Note: you can have decimal answers ★

Examples:

① $\frac{3\pi}{4}$ convert to degrees

$$\frac{3\pi}{4} * \frac{180^\circ}{\pi} = \frac{3\cancel{\pi}(180^\circ)}{4\cancel{\pi}} = \frac{3(180^\circ)}{4}$$

$$= 135^\circ$$

② 6 radian, convert to degrees

$$\frac{6}{1} * \frac{180^\circ}{\pi} = \frac{6(180^\circ)}{\pi} = 343.77^\circ$$

To find radians given degrees:

$$\text{Radians} = \text{Degrees} * \frac{\pi}{180^\circ}$$

★ Note: answer has to have π in it (no decimals)

Examples:

① 60° , convert to radians

$$\frac{60^\circ}{1} * \frac{\pi}{180^\circ} = \frac{60\cancel{\pi}}{180\cancel{\circ}} = \frac{60\pi}{180} = \frac{1\pi}{3}$$

② -120° , convert to radians

$$\frac{-120}{1} \cdot \frac{\pi}{180} = \frac{-120\pi}{180} = \frac{-2\pi}{3}$$