Precalculus
Conversions between degrees and radians

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- In other words, a half-turn is measured by πrad or 180°.
- Degrees are useful because the most frequently encountered fractions of a half turn are measured by a whole number of degrees.
- If a measurement unit is not specified, it is implied to be radians. For example, in $\sin 5$, the number 5 stands for 5 radians.

$t^\circ = \frac{t}{180}\pi$ (radians).

Example

Convert from degrees to radians.

Deg.	45°	36°	-20°	360°	-720°	-225°	2015°
Rad.							

$x = \frac{x}{\pi}180^\circ$.

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Convert from radians to degrees.

Rad.	$\frac{\pi}{3}$	$\frac{\pi}{10}$	$\frac{11\pi}{6}$	$\frac{7\pi}{4}$	$\frac{\pi}{7}$	$\frac{13\pi}{6}$	$-\frac{5\pi}{4}$	2
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Deg.	60°							

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Deg.	60°	18°						

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Deg.	60°	18°	330°					

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Deg.	45°	36°	-20°	360°	-720°	-225°	2015°
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Deg.	60°	18°	330°	?				

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Deg.	60°	18°	330°	315°				

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Deg.	60°	18°	330°	315°	$\frac{180^\circ}{7} \approx 25.7^\circ$			

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Deg.	60°	18°	330°	315°	$\frac{180^\circ}{7} \approx 25.7^\circ$	390°		

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Deg.	60°	18°	330°	315°	$\frac{180^\circ}{7} \approx 25.7^\circ$	390°	-225°	$\frac{2}{\pi}180^\circ \approx 114.6^\circ$