

Radian Measure

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

Common Conversions

<i>Degrees</i>	<i>Radians</i>	<i>Degrees</i>	<i>Radians</i>	<i>Degrees</i>	<i>Radians</i>	<i>Degrees</i>	<i>Radians</i>
30	$\frac{\pi}{6}$	120	$\frac{2\pi}{3}$	210	$\frac{7\pi}{6}$	300	$\frac{5\pi}{3}$
45	$\frac{\pi}{4}$	135	$\frac{3\pi}{4}$	225	$\frac{5\pi}{4}$	315	$\frac{7\pi}{4}$
60	$\frac{\pi}{3}$	150	$\frac{5\pi}{6}$	240	$\frac{4\pi}{3}$	330	$\frac{11\pi}{6}$
90	$\frac{\pi}{2}$	180	π	270	$\frac{3\pi}{2}$	360	2π

e.g. Express in radians

$$(i) 67^\circ = \frac{67\pi}{180} \text{ rads}$$
$$= \underline{1.1693} \text{ rads (to 4 dp)}$$

$$(ii) 36^\circ = \frac{36\pi}{180} \text{ rads}$$
$$= \underline{\frac{\pi}{5}} \text{ rads}$$

Convert to degrees

$$(iii) \frac{\pi}{8} \text{ rads} = \frac{\pi}{8} \times \frac{180}{\pi}$$
$$= \underline{22\frac{1}{2}}^\circ$$

$$(iv) 111.1 \text{ rads} = 111.1 \times \frac{180}{\pi}$$
$$= \underline{6365.6}^\circ \text{ (to 1 dp)}$$

Exercise 11G; 1 to 8 ace etc, 9, 10, 11ace etc, 14, 15