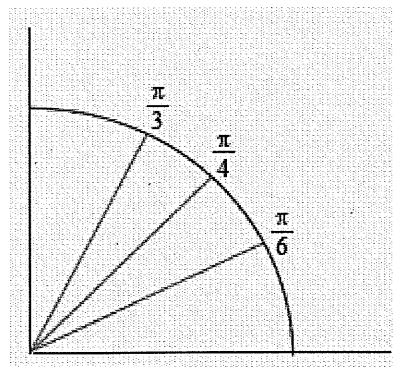
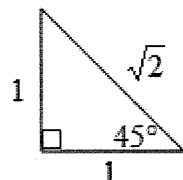
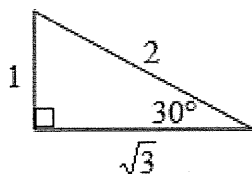


Review ratios for 30, 60, 90 and 45, 45, 90 triangles.



Ex. 1 Use these to find the value of all 6 trig functions at 60° .

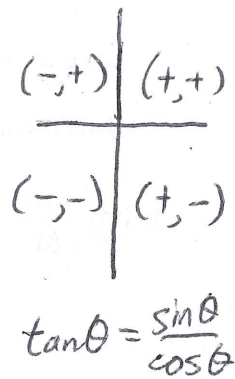
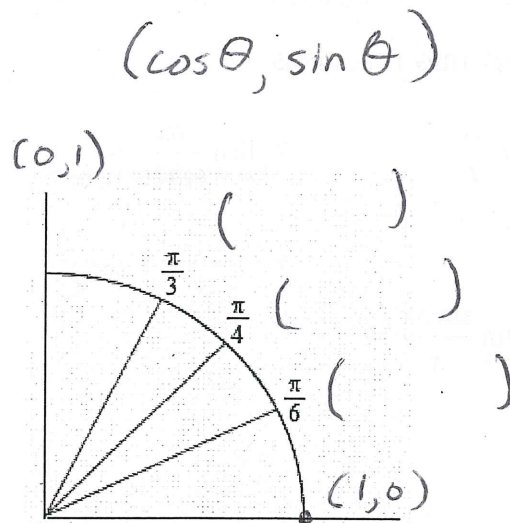
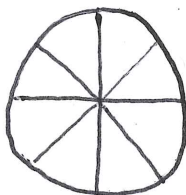
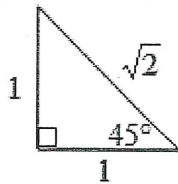
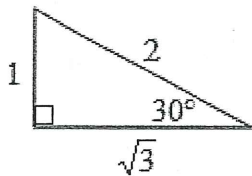
Ex. 2 Use these to find the value of all 6 trig functions at 225° .

1 radian is simply the angle formed when a radius is wrapped around the outside of the circle. It takes 2π radians to get all the way around the circle, so it takes π radians to get half way around. This means that π radians equates to 180° .

Ex. 3 Find period, amplitude of $y = 2\cos\left(\frac{\pi x}{3}\right) - 6$

Ex. 4: Solve for x : $\sin 2x = \sin x$ if $0 \leq x < 2\pi$

Review ratios for 30, 60, 90 and 45, 45, 90 triangles.



Ex. 1 Use these to find the value of all 6 trig functions at 60° .

$\sin(\pi/3) = \frac{\sqrt{3}}{2}$ $\csc(\pi/3) = \frac{2}{\sqrt{3}}$ or $\frac{2\sqrt{3}}{3}$

$\cos(\pi/3) = \frac{1}{2}$ $\sec(\pi/3) = 2$

$\tan(\pi/3) = \sqrt{3}$ $\cot(\pi/3) = \frac{1}{\sqrt{3}}$ or $\frac{\sqrt{3}}{3}$

Ex. 2 Use these to find the value of all 6 trig functions at 225° .

$\sin(5\pi/4) = -\frac{\sqrt{2}}{2}$ $\csc(5\pi/4) = -\frac{2}{\sqrt{2}}$ or $-\sqrt{2}$

$\cos(5\pi/4) = -\frac{\sqrt{2}}{2}$ $\sec(5\pi/4) = -\sqrt{2}$

$\tan(5\pi/4) = 1$ $\cot(5\pi/4) = 1$

1 radian is simply the angle formed when a radius is wrapped around the outside of the circle. It takes 2π radians to get all the way around the circle, so it takes π radians to get half way around. This means that π radians equates to 180° .

Ex. 3 Determine the value of all 6 trig functions for $\theta = 5\pi/3$.

Find period, amplitude of $y = 2\cos(\frac{\pi x}{3}) - 6$

period = $\frac{2\pi}{b}$

period = $\frac{2\pi}{\pi/3} = 2 \cdot 3 = 6$

amplitude = 2

$y = a \cos(bx - c) + d$

Ex. 4 $\sin 2x = \sin x$ $0 \leq x < 2\pi$

$x = 0, \pi, \pi/3, 5\pi/3$