

# SPECIAL ANGLE VALUES

Deg	Rads	$\sin$	$\cos$	$\tan$
$0^\circ$	$0$	$\frac{\sqrt{0}}{2} = 0$	$1$	$0$
$30^\circ$	$\frac{\pi}{6}$	$\frac{\sqrt{1}}{2} = \frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$
$45^\circ$	$\frac{\pi}{4}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{\sqrt{2}} = 1$
$60^\circ$	$\frac{\pi}{3}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\frac{\sqrt{3}}{1} = \sqrt{3}$
$90^\circ$	$\frac{\pi}{2}$	$\frac{\sqrt{4}}{2} = 1$	$0$	undef

$\sin \theta = \frac{y}{r}$     $\cos \theta = \frac{x}{r}$     $\tan \theta = \frac{y}{x}$

$\sin 120^\circ = \frac{\sqrt{3}}{2}$



$\sec 210^\circ = \frac{2}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$



$\sin 270^\circ = -1$



$30 \cdot \frac{\pi}{180} = \frac{\pi}{6}$



$\tan \frac{3\pi}{4} = -1$

$\cot \frac{11\pi}{6} = \frac{3\sqrt{3}}{\sqrt{3} \cdot \sqrt{3}} = \frac{3\sqrt{3}}{3} = \sqrt{3}$

$15/6 = \frac{5\sqrt{3}}{2}$



$\csc 7\pi = \frac{1}{0} = \text{undef}$



$$\frac{\cos 2\pi - \sec \pi}{\csc^2 315^\circ \cdot \tan \frac{17\pi}{6}}$$

$$= \frac{-\frac{1}{2} + 1}{(-\sqrt{2})^2 \left(-\frac{\sqrt{3}}{3}\right)}$$

$$= \frac{\frac{1}{2}}{\frac{2 \cdot -\sqrt{3}}{3}} = \frac{\frac{1}{2}}{-\frac{2\sqrt{3}}{3}}$$

$$= \frac{1}{2} \cdot -\frac{3}{2\sqrt{3}}$$

$$= \frac{-3 \cdot \sqrt{3}}{4\sqrt{3} \cdot \sqrt{3}}$$

$$= \frac{-3\sqrt{3}}{4 \cdot 3}$$

$$= \boxed{-\frac{\sqrt{3}}{4}}$$

$$\sin^2 x + 2\sin x - 3 = 0$$

$$(\sin x + 3)(\sin x - 1) = 0$$

$$\sin x + 3 = 0 \quad \sin x - 1 = 0$$

$$\sin x = -3 \quad \sin x = 1$$



Solve for  $\theta$  with  $0^\circ \leq \theta < 360^\circ$

$$\cos \theta = -\frac{\sqrt{2}}{2}$$



135°  
225°

$$0 < \theta < 2\pi$$

$$\csc \theta = -\frac{2\sqrt{3}}{3}$$

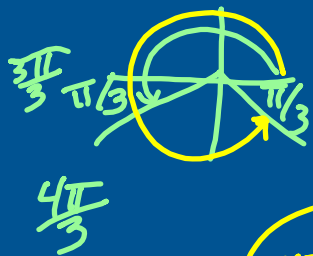
- 1) Quad
- 2) Ref  $\angle$
- 3) Name angle

$$\cot \theta = 0 \quad \text{Rads}$$



$\frac{\pi}{2}, \frac{3\pi}{2}$

$$1\frac{1}{2} = \frac{3}{2}\pi$$



$$2\pi - \frac{\pi}{3}$$

$$\frac{6\pi}{3} - \frac{\pi}{3} = \frac{5\pi}{3}$$

$\frac{4\pi}{3}, \frac{5\pi}{3}$