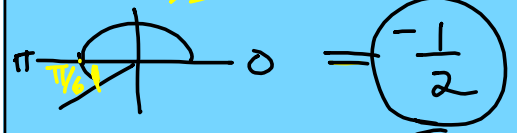
Special Angle Values.

RADIANS

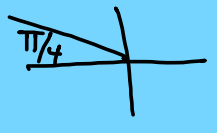
$30° \cdot \frac{\pi}{180°} = \frac{\pi}{6}$

$\sin \frac{7\pi}{6}$ 1½



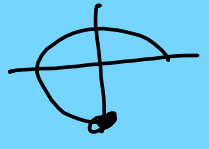
$= -\frac{1}{2}$

$\sec \frac{3\pi}{4} = \frac{2}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{2\sqrt{2}}{2}$



$= -\sqrt{2}$

$\cot \frac{3\pi}{2}$ 1½



$= 0$

Deg	Rads	Sin/csc	Cos/sec	tan/cot
0°	0	$\frac{\sqrt{0}}{2} = 0$	1	$\frac{0}{1} = 0$
30°	$\frac{\pi}{6}$	$\frac{\sqrt{1}}{2} = \frac{1}{2}$	$\sqrt{3}/2$	$\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$
45°	$\frac{\pi}{4}$	$\frac{\sqrt{2}}{2}$	$\sqrt{2}/2$	$\frac{\sqrt{2}}{\sqrt{2}} = 1$
60°	$\frac{\pi}{3}$	$\frac{\sqrt{3}}{2}$	½	$\frac{\sqrt{3}}{1} = \sqrt{3}$
90°	$\frac{\pi}{2}$	$\frac{\sqrt{4}}{2} = 1$	0	$\frac{1}{0}$ = undef

$\frac{0}{1} = 0$

Deg	Rads	Sin/csc	Cos/sec	tan/cot
0°	0	$\frac{\sqrt{0}}{2}=0$	1	$\frac{0}{1}=0$
30°	$\frac{\pi}{6}$	$\frac{\sqrt{1}}{2}=\frac{1}{2}$	$\sqrt{3}/2$	$\frac{1}{\sqrt{3}}=\frac{\sqrt{3}}{3}$
45°	$\frac{\pi}{4}$	$\frac{\sqrt{2}}{2}$	$\sqrt{2}/2$	$\frac{\sqrt{2}}{\sqrt{2}}=1$
60°	$\frac{\pi}{3}$	$\frac{\sqrt{3}}{2}$	$1/2$	$\frac{\sqrt{3}}{1}=\sqrt{3}$
90°	$\frac{\pi}{2}$	$\frac{\sqrt{4}}{2}=1$	0	$\frac{1}{0}=$ undef

$\pi/4$ $\pi/3$ $1\frac{1}{3}$ $1\frac{5}{6}$ $2\frac{3}{4}$

$$\frac{\cos^2\left(\frac{11\pi}{4}\right)+\csc\left(\frac{-9\pi}{3}\right)\tan\left(\frac{11\pi}{6}\right)}{+\sin\frac{3\pi}{2}+\cos 17\pi}$$

$1\frac{1}{2}$

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

$$=\frac{\frac{2}{4}+\frac{-2}{3}}{-2}$$

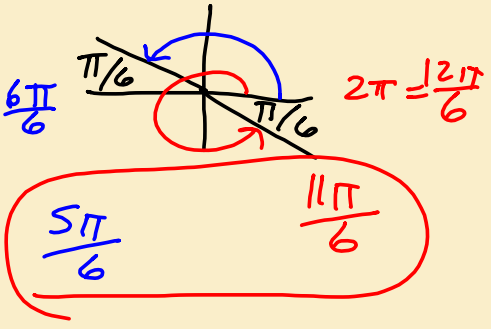
$$=\frac{\frac{1}{2}-\frac{2}{3}}{-2}=\frac{\frac{3}{6}-\frac{4}{6}}{-2}=\frac{-\frac{1}{6}}{-\frac{2}{1}}$$

$$=-\frac{1}{6}\cdot\frac{1}{-2}=\frac{1}{12}$$

Find all possible angle for θ if $0 \le \theta < 2\pi$.

Answers in Rads

$$\tan\theta = -\frac{\sqrt{3}}{3}$$



1) Find quadrants
2) Determine reference ∠ in Rads
3) Name angles.

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