Special Angles-Radians

Rads	Deg	csc · Sin	Sec Cos	Cot tan
0	0°	$\frac{\sqrt{0}}{2}=0$	1	$\frac{0}{1}=0$
$\pi/6$	30°	$\frac{\sqrt{1}}{2}=\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{1\sqrt{3}}{\sqrt{3}\sqrt{3}}=\frac{\sqrt{3}}{3}$
$\pi/4$	45°	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{\sqrt{2}}=1$
$\pi/3$	60°	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\frac{\sqrt{3}}{1}=\sqrt{3}$
$\pi/2$	90°	$\frac{\sqrt{4}}{2}=1$	0	$\frac{1}{0}=$ Undef

$\sin\frac{7\pi}{6}=\boxed{-\frac{1}{2}}$

1st & 2nd T

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

$=\frac{2\sqrt{2}}{2}=\boxed{-\sqrt{2}}$

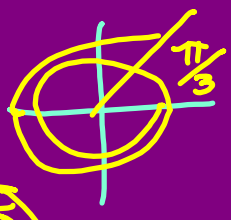
$\cot\frac{3\pi}{2}=0$

1½π

$\csc\left(-\frac{11\pi}{3}\right)$

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

$\frac{2}{\sqrt{3}}\cdot\frac{\sqrt{3}}{\sqrt{3}}=\boxed{\frac{2\sqrt{3}}{3}}$



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$\pi/4$ $\quad 2^{nd}/4$ $\quad \pi/3$ $\quad 1^{st}/6$ $\quad 1^{st}/3$

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

$1\frac{1}{2}$

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

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

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

$$=\frac{1}{12}$$

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

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

1) Find quadrants
2) Determine reference angles
3) Name angles.

$\frac{5\pi}{6}, \frac{11\pi}{6}$

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

$\frac{5\pi}{4}$ $\frac{7\pi}{4}$

May 8, 2023