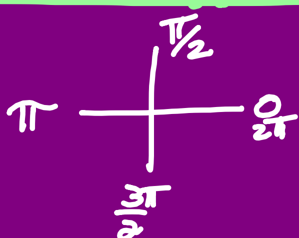
May 8, 2024

Special Angles-Radians

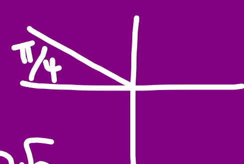
$\sin \frac{7\pi}{6}$

$1\frac{1}{6}$



$-\frac{1}{2}$

$\sec \frac{3\pi}{4}$



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

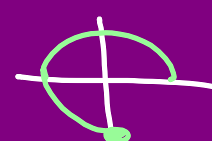
$-\sqrt{2}$

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

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

$1\frac{1}{2}$

$= 0$



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

$2\frac{3}{4}$ $\frac{\pi}{4}$ $\frac{\pi}{3}$ $-1\frac{1}{3}$ $1\frac{1}{4}$

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

$$\sin\frac{11\pi}{2}+\cos 17\pi$$

$5\frac{1}{2}$ 0°

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

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

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

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

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

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°	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{\sqrt{2}}=1$
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Find angle θ if $0 \le \theta < 2\pi$.

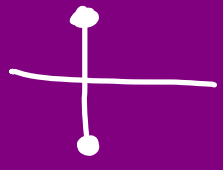
$\tan\theta = -\frac{\sqrt{3}}{3}$

1) Find quadrants
2) Find ref. angle in rads
3) Name angles.

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

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

$\cot\theta = 0$



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

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