

PRE-CALCULUS

Standard Trig. Values Review

Complete the following chart with **exact** values in standard, simplified form.

θ°	θ (radians)	Quadrant	Ref θ	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\cot \theta$	$\sec \theta$	$\csc \theta$
60°	$\pi/3$	I	$\pi/3$ or 60°	$\sqrt{3}/2$	$1/2$	$\frac{\sqrt{3}/2}{1/2} = \sqrt{3}$	$\frac{1/2}{\sqrt{3}/2} = \frac{1}{\sqrt{3}}$	2	$\frac{2}{\sqrt{3}}$
225°	$5\pi/4$	III	$\pi/4$ or 45°	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{2}}{2}$	$\frac{-\sqrt{2}/2}{-\sqrt{2}/2} = 1$	1	$\frac{2}{-\sqrt{2}} = -\sqrt{2}$	$-\sqrt{2}$
240°	$4\pi/3$	III	$\pi/3$ or 60°	$-\sqrt{3}/2$	$-1/2$	$\frac{-\sqrt{3}/2}{-1/2} = \sqrt{3}$	$\frac{-1/2}{\sqrt{3}/2} = -\frac{1}{\sqrt{3}}$	-2	$\frac{2}{-\sqrt{3}} = -\frac{2\sqrt{3}}{3}$
330°	$11\pi/6$	IV	30°	$-1/2$	$\sqrt{3}/2$	$\frac{-1/2}{\sqrt{3}/2} = -\frac{1}{\sqrt{3}}$	$-\sqrt{3}$	$\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$	-2
270°	$3\pi/2$	Neg y-axis	N/A	-1	0	$\frac{-1}{0} = \text{und}$	$\frac{0}{-1} = 0$	$\frac{1}{0} = \text{und}$	-1
-585°	$-\frac{585\pi}{180} = -\frac{13\pi}{4}$	II	$\pi/4$ or 45°	$\sqrt{2}/2$	$-\sqrt{2}/2$	$\frac{\sqrt{2}/2}{-\sqrt{2}/2} = -1$	-1	$\frac{2}{-\sqrt{2}} = -\frac{2\sqrt{2}}{2} = -\sqrt{2}$	$\sqrt{2}$
150°	$5\pi/6$	II	$\pi/6$ or 30°	$1/2$	$-\sqrt{3}/2$	$\frac{1/2}{-\sqrt{3}/2} = -\frac{1}{\sqrt{3}}$	$-\sqrt{3}$	$\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$	2
30°	$\pi/6$	I	$\pi/6$ or 30°	$1/2$	$\sqrt{3}/2$	$\frac{1/2}{\sqrt{3}/2} = \frac{1}{\sqrt{3}}$	$\sqrt{3}$	$\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$	2
-240°	$-4\pi/3$	II	$\pi/3$ or 60°	$\sqrt{3}/2$	$-1/2$	$\frac{\sqrt{3}/2}{-1/2} = -\sqrt{3}$	$-\frac{\sqrt{3}}{3}$	-2	$\frac{2\sqrt{3}}{3}$
180°	π	Neg x-axis	N/A	0	-1	$\frac{0}{-1} = 0$	$\frac{-1}{0} = \text{und}$	-1	$\frac{1}{0} = \text{und}$
-90°	$-\pi/2$	Neg y-axis	N/A	-1	0	$\frac{-1}{0} = \text{und}$	$\frac{0}{-1} = 0$	$\frac{1}{0} = \text{und}$	-1

Name

Kay

Are ALWAYS reciprocals!

$$\sqrt{3} \rightarrow \frac{1}{\sqrt{3}}$$