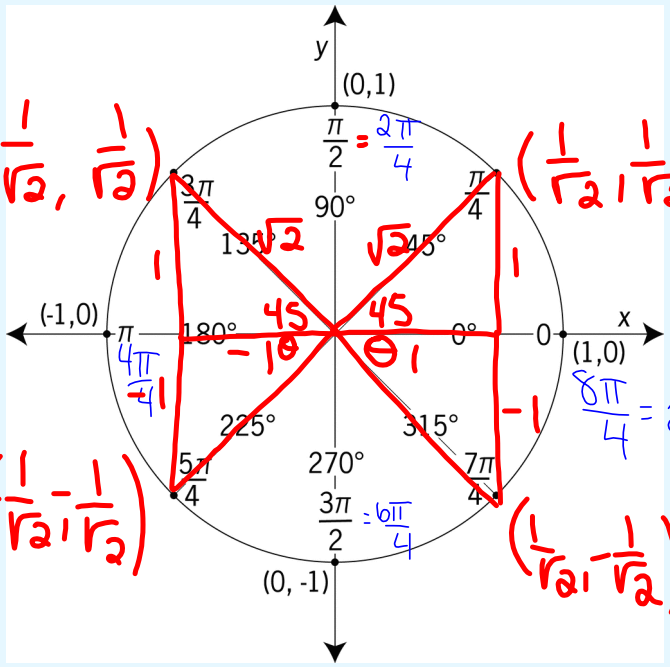
Trigonometry Unit

13.2 - 13.3
to find exact trig values of any angle given in degrees or radians

45° Increments



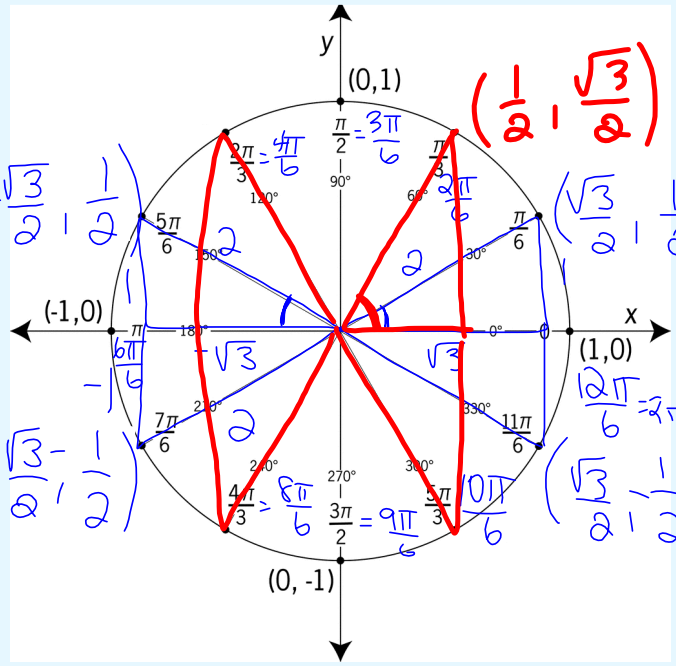
$\left(-\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}\right)$ $\left(\frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}}\right)$ $\sin\frac{\pi}{4} = \frac{1}{\sqrt{2}}$

$\cos\frac{\pi}{4} = \frac{1}{\sqrt{2}}$

$\left(-\frac{1}{\sqrt{2}}, -\frac{1}{\sqrt{2}}\right)$ $\left(\frac{1}{\sqrt{2}}, -\frac{1}{\sqrt{2}}\right)$

Pull

30° and 60° Increments



$\left(\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$ $\sin 30° = \frac{1}{2}$

$\left(\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$ $\cos\frac{\pi}{6} = \frac{\sqrt{3}}{2}$

$\sin\frac{5\pi}{6} = \frac{1}{2}$

$\left(-\frac{\sqrt{3}}{2}, \frac{1}{2}\right)$ $\cos 150° = -\frac{\sqrt{3}}{2}$

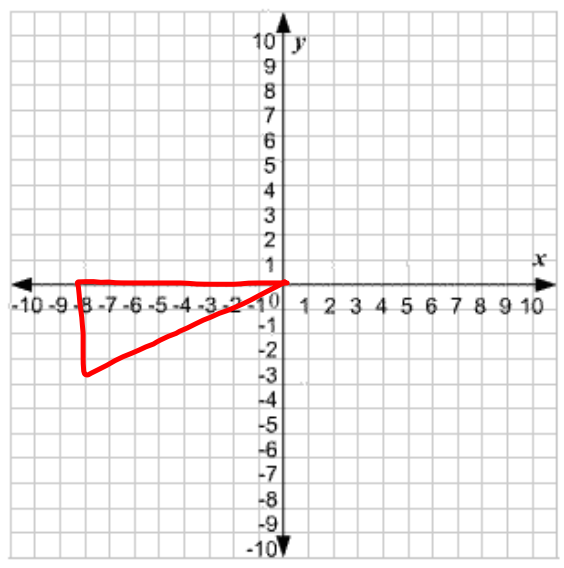
Pull

Radian Pattern

2nd Quadrant $(x-1)\pi / x$ Sin positive	1st Quadrant π / x All positive
3rd Quadrant $(x+1)\pi / x$ Tan positive	4th Quadrant $(2x-1)\pi / x$ Cos positive

Triangles

S

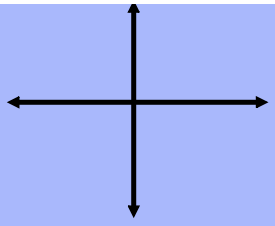


A

T

C

Examples



1

2 $\sin \frac{5\pi}{6}$ $\cos -\frac{\pi}{3}$ $\cos \frac{5\pi}{4}$

3 $\cos 210^o$ $\sin 120^o$ $\tan \frac{3\pi}{4}$

4

5 $\tan \frac{11\pi}{6}$ $\tan 60^o$ $\sin 585^o$

CLASSWORK/
HOMEWORK 13.3

WS#2 -
Pt 1 #3-19 odd (skip 11,13,15)
Pt 3 #3-19 odd (skip 7)

13.3 Radian Measure.gsp