In which quadrant or on which axis does the terminal angle of each angle lie?

1. $-1040°$

$+1080°$

$40°$

I

2. $975°$

-720

$255°$

III

In which quadrant or on which axis does the terminal angle of each angle lie?

3. $\theta = -\frac{23\pi}{8} + \frac{16\pi}{8} = -\frac{7\pi}{8}$

$-\frac{7\pi}{8} + \frac{16\pi}{8}$

$= \frac{9\pi}{8} \rightarrow$ III

4. $\theta = \frac{11\pi}{2} - \frac{4\pi}{2} = \frac{7\pi}{2}$

$\frac{7\pi}{2} - \frac{4\pi}{2}$

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

Neg y-axis

1. Are $730°$ and $3990°$ coterminal?

$3990 - 730$

$= 3260° \div 360 = 9.05$

NO

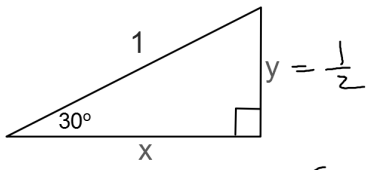
Since 3990 is not an integer multiple away 730 they are not coterminal.

Hwk #29: Sec 13-2

Pages 722

Problems 1-3, 12-15, 39, 40, 46 48

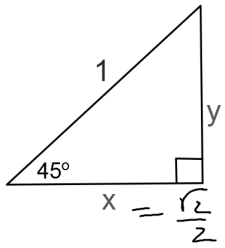
Use the relationships in the special right triangles to find the EXACT value of x and y.



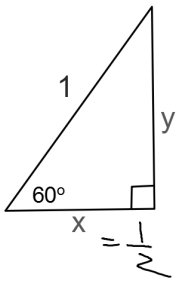
$\frac{1}{2} \cdot \sqrt{3} = \frac{\sqrt{3}}{2}$

The Short leg equals half the Hypotenuse.

The Long Leg equals the Short Leg times square root of 3.

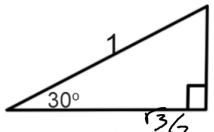


A leg equals the hypotenuse divided by square root of 2. The legs are equal.



$\frac{1}{2} \cdot \sqrt{3} = \frac{\sqrt{3}}{2}$

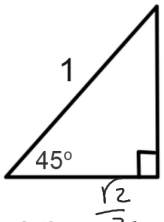
SOHCAHTOA



1/2

Find the exact value of each:

1. $\sin 30^\circ = \frac{\frac{1}{2}}{1} = \frac{1}{2}$
2. $\cos 30^\circ = \frac{\sqrt{3}}{2}$
3. $\sin 60^\circ = \frac{\sqrt{3}}{2}$
4. $\cos 60^\circ = \frac{1}{2}$
5. $\tan 30^\circ$ $\frac{1/2}{\sqrt{3}/2} = \frac{\sqrt{3}}{3}$
6. $\tan 60^\circ$ $\frac{\sqrt{3}/2}{1/2} = \sqrt{3}$



SOHCAHTOA

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

Find the exact value of each:

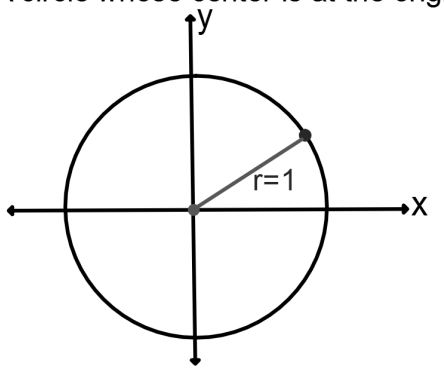
1. $\sin 45° = \frac{\sqrt{2}}{2}$
2. $\cos 45° = \frac{\sqrt{2}}{2}$
3. $\tan 45° = 1$

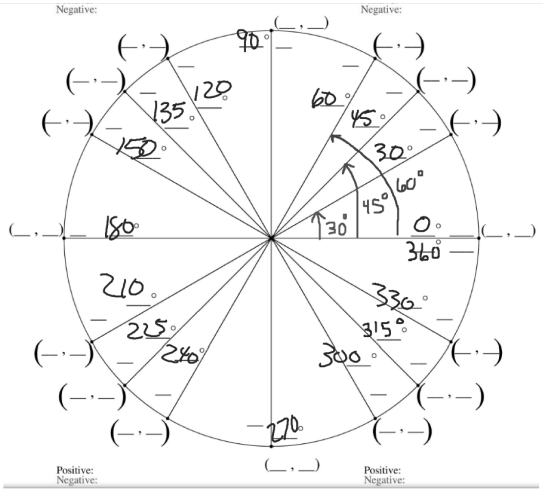
The unit circle is used to find the exact value for $\sin\theta$ and $\cos\theta$ using the special right triangles.

So all the angles on the unit circle are related to either 30°, 60°, or 45°

The Unit Circle:

A circle whose center is at the origin and has radius = 1.





fill in all the angles in degrees