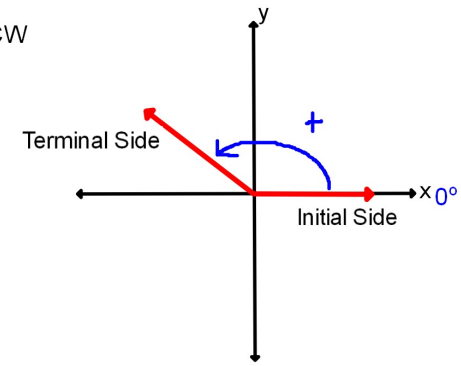
Sec 13-2 Angles in Standard Position:

- Vertex is at the origin
- One ray is on the positive x-axis.
- 0° is on the positive x-axis
- Positive angles are measured CCW



Coterminal Angles: Angles in standard position that have the same terminal side.

To find coterminal angles take the original angle and ± multiples of 360°

Find the measure of each angle between 0° and 360° that is coterminal with the given angle.

1. $470° - 360 = 110$

2. $-75° + 360 = 285$

3. $2450° = 290°$

4. $-1370° = 70°$

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

a. 730°

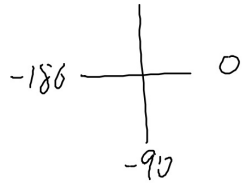
-720

$10°$

b. -130°

$+360$

230



c. 990°

-720

$270°$

neg y-axis

d. 500°

II

Hwk #14

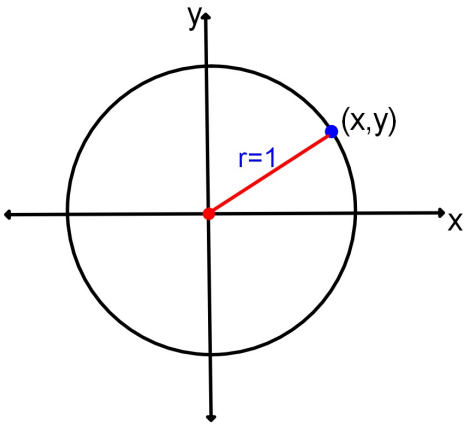
Sec 13-2 Due tomorrow

Pages 722-723

Problems 17-19, 40-42, 46-49

The Unit Circle:

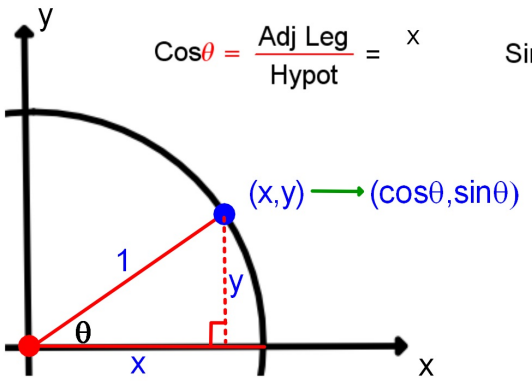
A circle whose center is at the origin and its radius = 1.



Find the exact value of each:

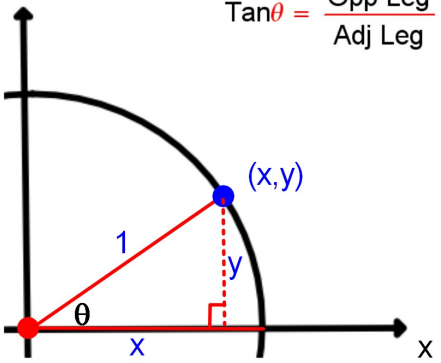
cosθ & sinθ

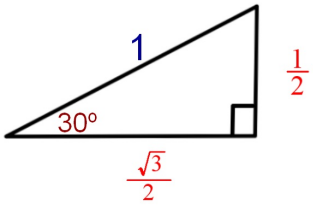
$\text{Cos}\theta = \frac{\text{Adj Leg}}{\text{Hypot}} = \frac{x}{}$ $\text{Sin}\theta = \frac{\text{Opp Leg}}{\text{Hypot}} = \frac{y}{}$



Tanθ

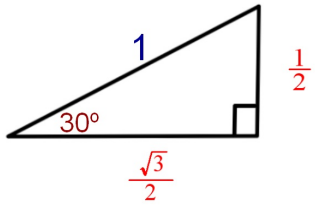
$\text{Tan}\theta = \frac{\text{Opp Leg}}{\text{Adj Leg}} = \frac{y}{x}$





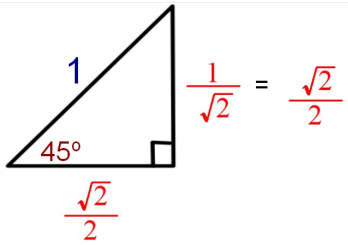
Find the exact value of each:

1. Sin30° = $\frac{1}{2}$
2. Cos30° = $\frac{\sqrt{3}}{2}$
3. Sin60° = $\frac{\sqrt{3}}{2}$
4. Cos60° = $\frac{1}{2}$



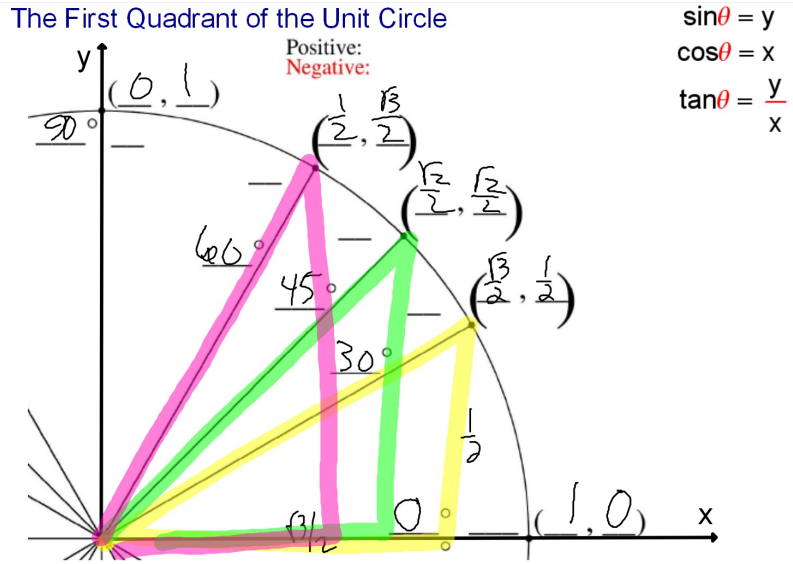
Find the exact value of each:

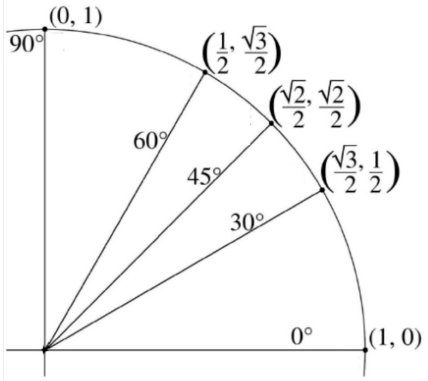
1. Tan30° = $\frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} \cdot \frac{2}{\sqrt{3}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$
2. Tan60° = $\frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} \cdot \frac{2}{1} = \sqrt{3}$



Find the exact value of each:

1. Sin45° $\frac{\sqrt{2}}{2}$
2. Cos45° $\frac{\sqrt{2}}{2}$
3. Tan 45° 1





Find the exact value of each:

1. Sin 45° $\frac{\sqrt{2}}{2}$
2. Cos 60° $\frac{1}{2}$
3. Tan 45° 1
4. Tan 60° $\frac{\sqrt{3}}{1}$ $\frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}}$
5. Cos 90° 0
6. Sin 0° 0
7. Tan 90° $\frac{1}{0}$ undefined
8. Tan 0° $\frac{0}{1}$
9. Sin 90° 1
10. Cos 0° 1