

8.5

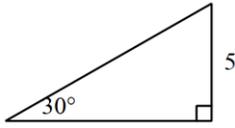
Date:

Objective:

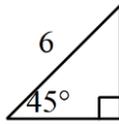
Review

Find the missing sides of the following.

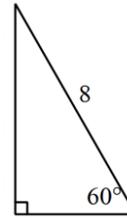
1.



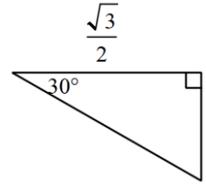
2.



3.



4.

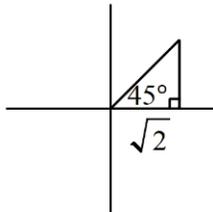


What is standard position?

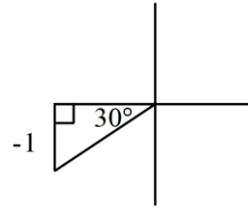
Now let's put the special right triangles in standard position.

Find the missing sides of the following.

1.



2.

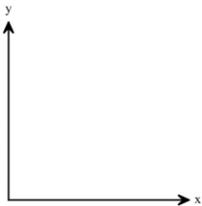


What are the adjacent, opposite, and hypotenuse for each of the above triangles?

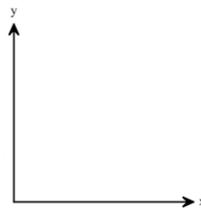
What if you are given the trigonometric ratio? Can you draw a triangle?

Draw a right triangle in standard position in the first quadrant and find the missing sides. Then find the angle in degrees and radians.

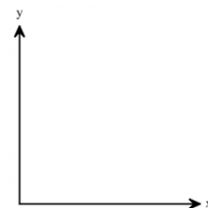
1. $\sin \theta = \frac{1}{2}$



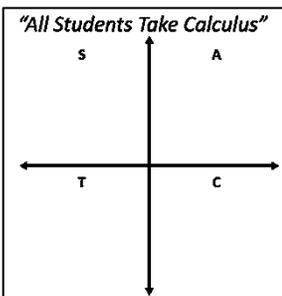
2. $\cos \alpha = \frac{\sqrt{3}}{2}$



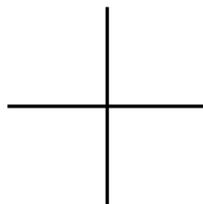
3. $\tan \theta = 1$



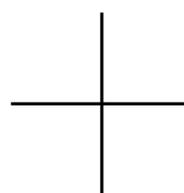
Is there somewhere else on the graph that would also work for each of these?



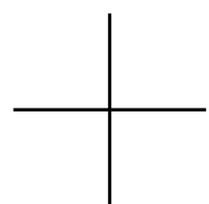
Where is $\sin \theta$ positive?



Where is $\cos \theta$ positive?



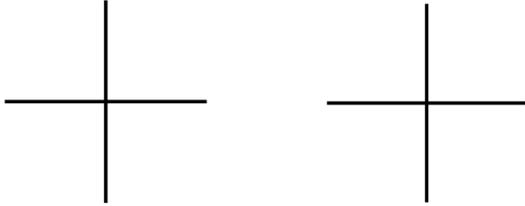
Where is $\tan \theta$ positive?



Find all angles in the interval $[0^\circ, 360^\circ)$ and $[0, 2\pi)$ that satisfy each equation. Remember to use your special right triangle patterns.

1. $\sin \theta = \frac{1}{2}$

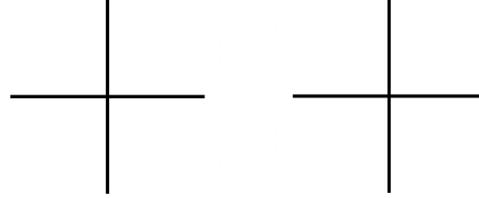
**What two quadrants is $\sin \theta$ positive?*



Degrees: _____ Radians: _____

2. $\tan \theta = \sqrt{3}$

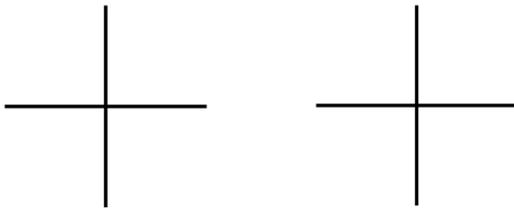
**What two quadrants is $\tan \theta$ positive?*



Degrees: _____ Radians: _____

3. $\sin \theta = -\frac{1}{2}$

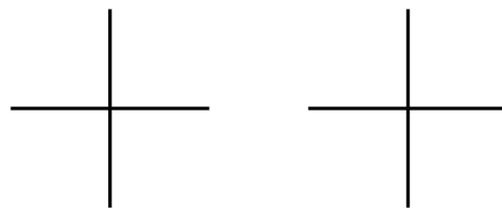
**What two quadrants is $\sin \theta$ negative?*



Degrees: _____ Radians: _____

4. $\tan \theta = -\sqrt{3}$

**What two quadrants is $\tan \theta$ negative?*



Degrees: _____ Radians: _____

Now try this one: $7\sqrt{3} - \cos \theta = 8\sqrt{3} + \cos \theta$

What should you do first?

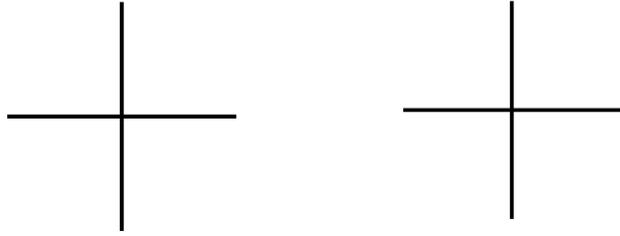
STEPS

- 1.
- 2.
- 3.
- 4.

Examples:

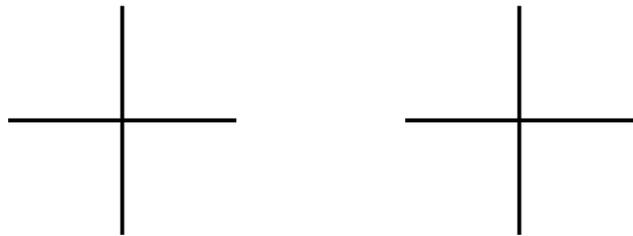
Find all angles in the interval $[0^\circ, 360^\circ)$ and $[0, 2\pi)$ that satisfy each equation.

1. $7\sqrt{3} - \cos \theta = 8\sqrt{3} + \cos \theta$



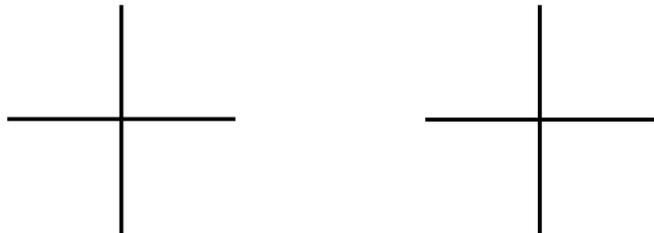
Degrees: _____ Radians: _____

2. $2\cos \alpha = -1$



Degrees: _____ Radians: _____

3. $-3\sqrt{3} + 4\tan \theta = \sqrt{3}$



Degrees: _____ Radians: _____