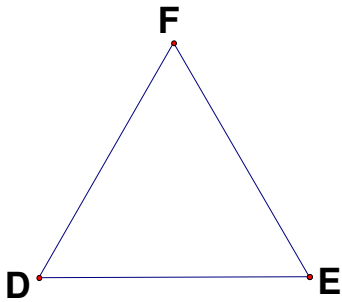


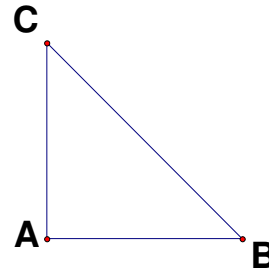
p.291 Trigonometric Functions on the Unit Circle

Previously we have looked at trigonometric functions in a right triangle. Now we are going to expand that view using the unit circle. There are certain angles we care about in the unit circle, we are going to figure out what those angles are using our old friends equilateral triangle and isosceles right triangle.

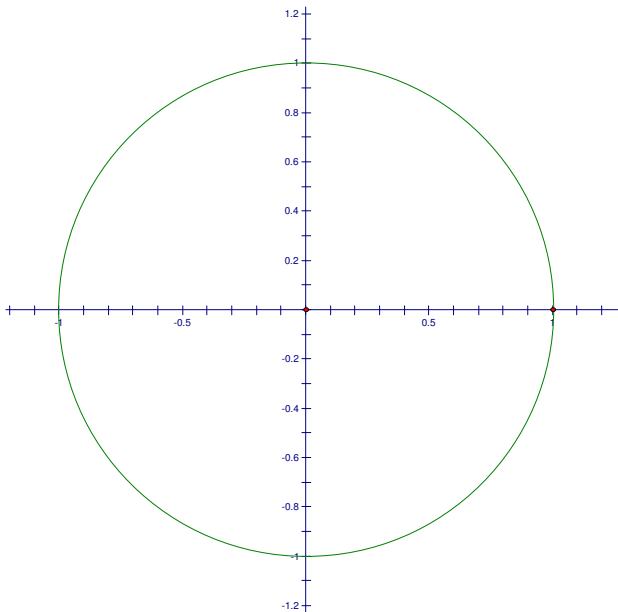
First, consider the following equilateral triangle and its angle measures.



Now, consider the following isosceles right triangle and its angle measures.



Now let's consider the unit circle. What does the unit circle give us that the right triangle does not?



Use the unit circle to find each value.

1.  $\sin 90^\circ$
2.  $\cos 45^\circ$
3.  $\tan(-60^\circ)$
4.  $\sin 225^\circ$
5.  $\sec 180^\circ$
6.  $\csc(-270^\circ)$

Find the values of the six trigonometric functions for angle  $\theta$  in standard position if a point with the given coordinates lies on its terminal side.

1.  $(2,4)$

2.  $(-3,7)$