

Precalc Warm Up – 11/15/10

Name: _____

Period: _____

1) Reduce the following fractions:

a. $\frac{90}{180} =$

b. $\frac{30}{180} =$

c. $\frac{60}{180} =$

d. $\frac{45}{180} =$

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Precalc – Radian Measures – 11/15/10

Name: _____

Block: _____

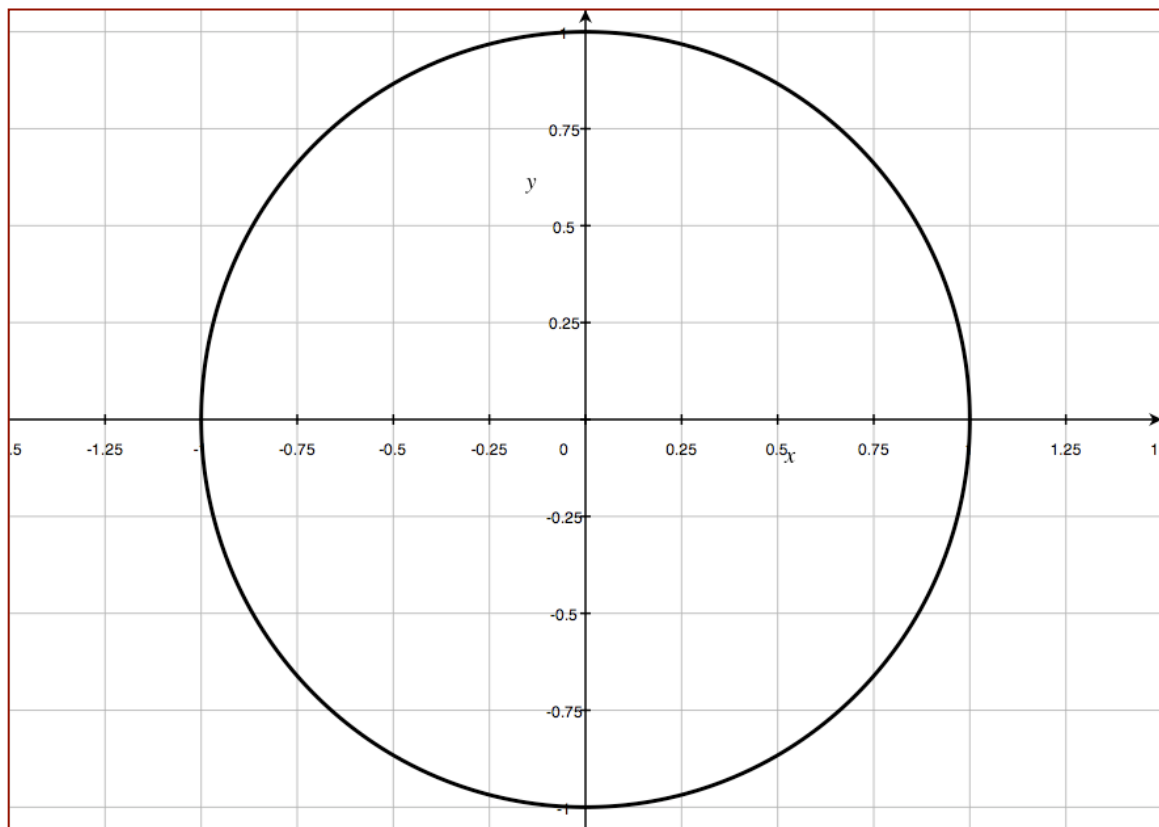
Students will be able to express degree measures in radians

- 1) Mr. Monte-Sano has a holiday dinner with his wife's family. The table is a circle and the radius is 1 meter. Mr Monte-Sano doesn't get along with his mother-in-law and tries to avoid contact with her.
 - a) If Mr. M tries to sit as far as possible from his mother-in-law, where should he sit?
 - b) Measuring AROUND THE OUTSIDE OF THE TABLE (not across the table) what is the farthest away that Mr. M can sit from his mother-in-law?

So, we can think of “how far around” a circle we are in two ways:

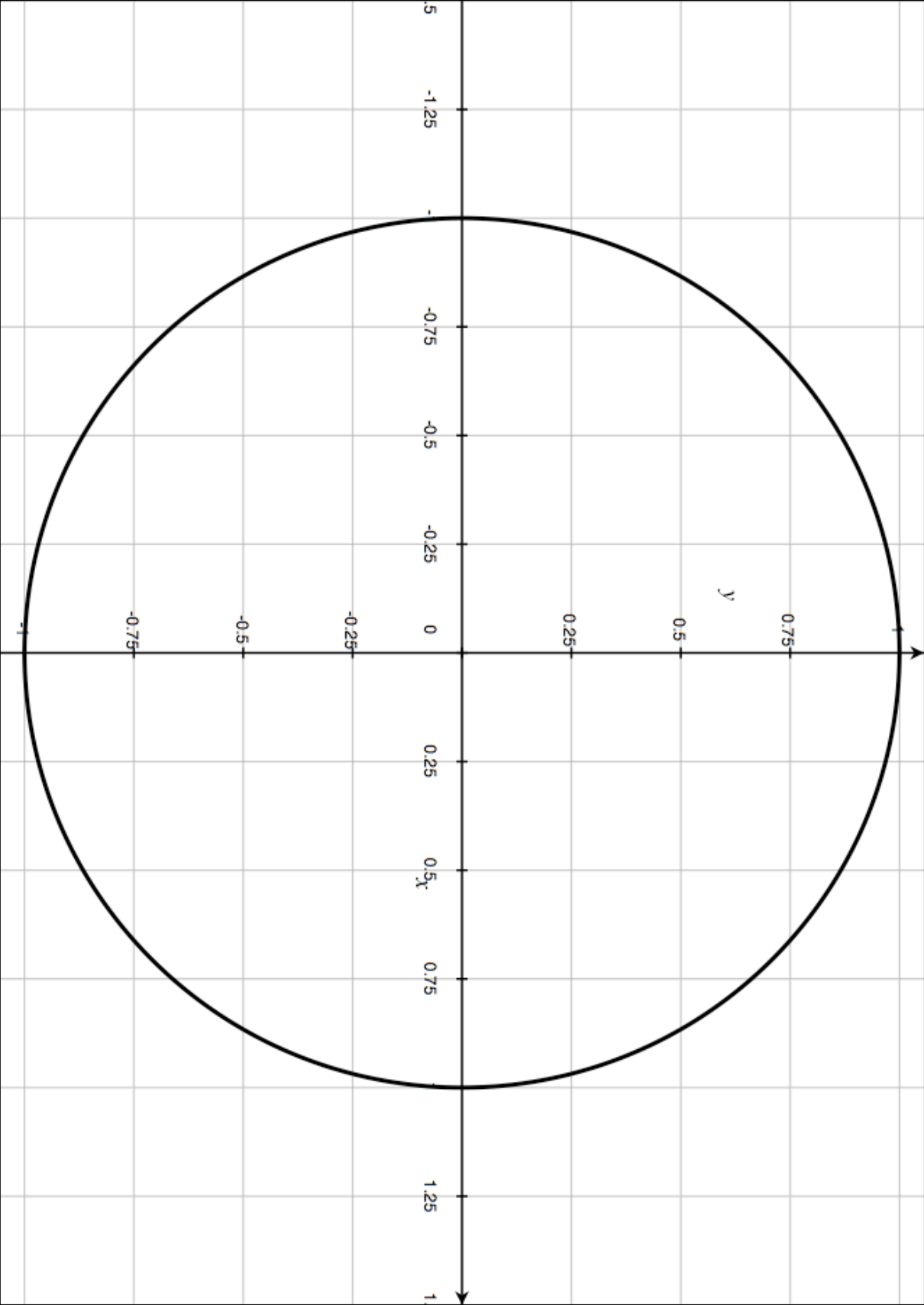
- 1) by the angle
- 2) By measuring the length around the outside of the circle.

Consider the unit circle on the x-y axes below.



- 1) Let's highlight the length of the arc for a 180° angle. In another color, highlight the arc length for a 90° angle. What fraction represents the arc length for the 180° angle as compared to the arc length of the 90° angle?

To convert an angle to radians:



To convert radians to an angle measurement:

Practice - fill in the missing values of the following table

<u>Degree Measure</u>	<u>Radian Measure</u>
180°	
90°	
360°	
60°	
150°	
	π
	$\frac{3\pi}{2}$
	$\frac{4\pi}{3}$
	$\frac{\pi}{2}$
	$\frac{\pi}{3}$

Precalc – Exit Slip – 11/15/10

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- 1) Sketch the angles 180° , 60° , 120° and 300° in standard position and express each measurement in radians

