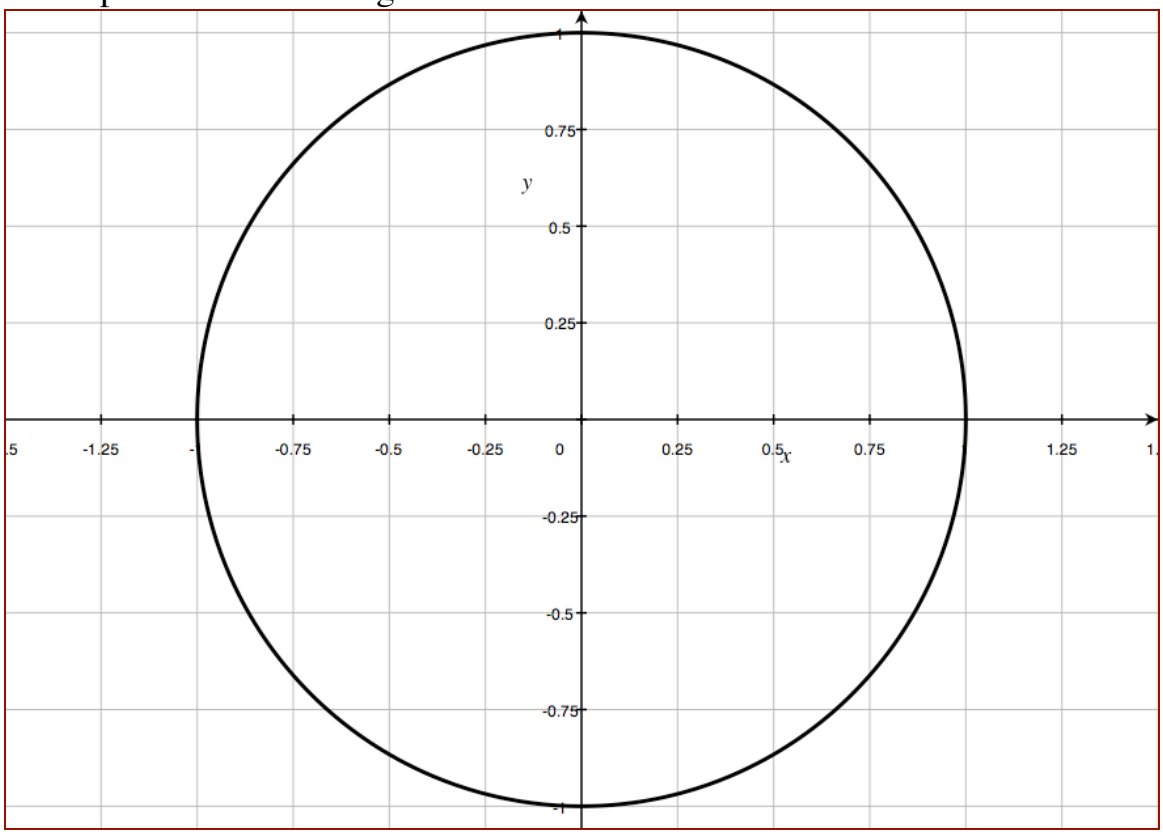
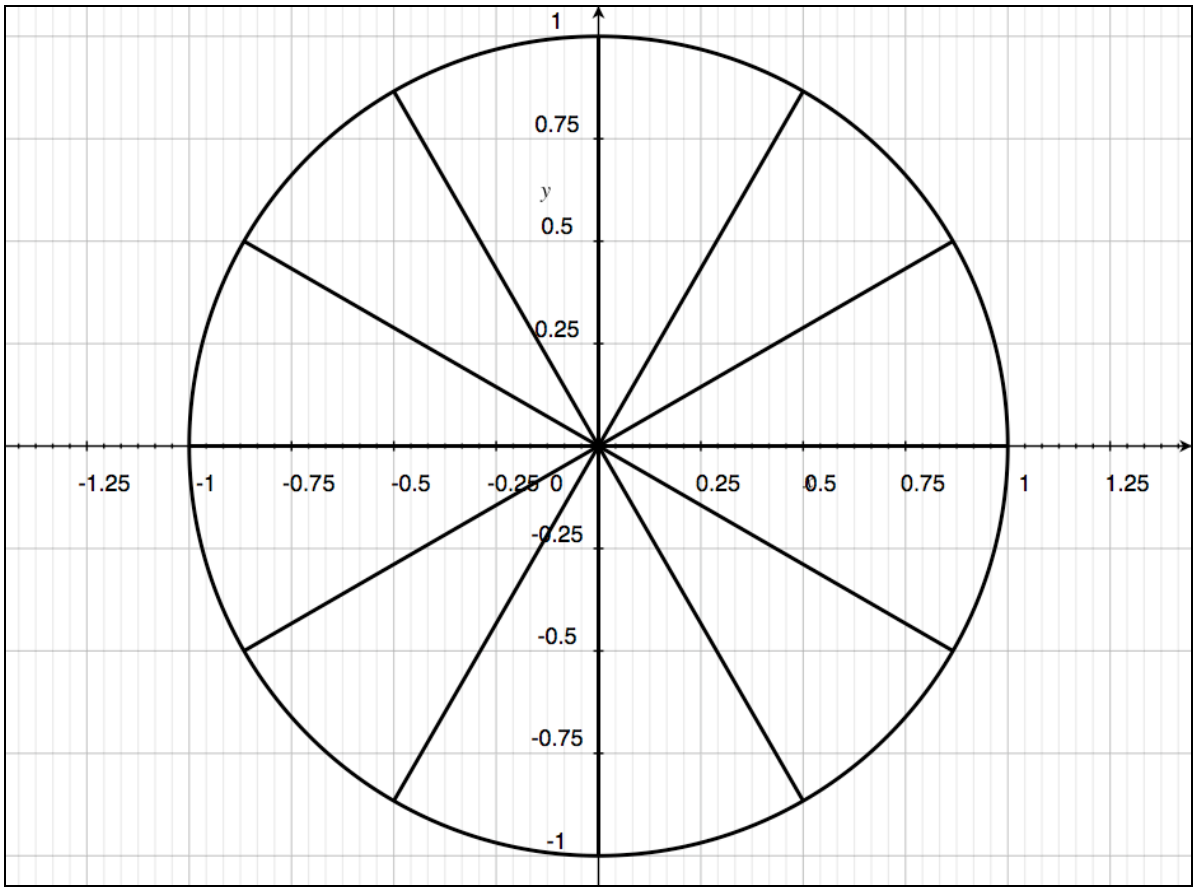
Precalc Warm Up – 12/13/10

Name:_____ Period:_____

1) Sketch the angle $240°$ in the unit circle. Find the x and y-value of the point where the angle intersects with the unit circle.





	30°	45°	60°
$\sin\theta =$	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
$\cos\theta =$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$
$\tan\theta =$	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$

Precalc
Graphs of Sine
PRACTICE for Mastery

Name:_____Date:_____Period:_____

Objective	Questions	Proficient _____ Correct	Highly Proficient _____ Correct
Students will be able to find measure of an angle given the sine of an angle or the side lengths of a triangle.	3	2	3
Students will be able graph sine.	1	1	1
Students will be able to find amplitude and period by graph and equation and match equation to graph.	7	5	6
Students will be able to use periodic functions in order to analyze real world situations.	4	3	4

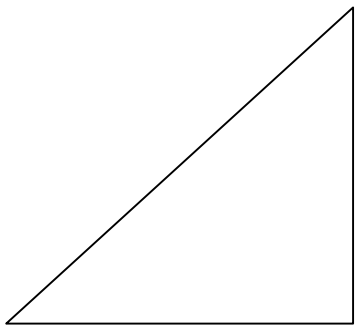
1) Find the angle θ that makes the following expression true.

$$\sin\theta = \frac{\sqrt{3}}{2}$$

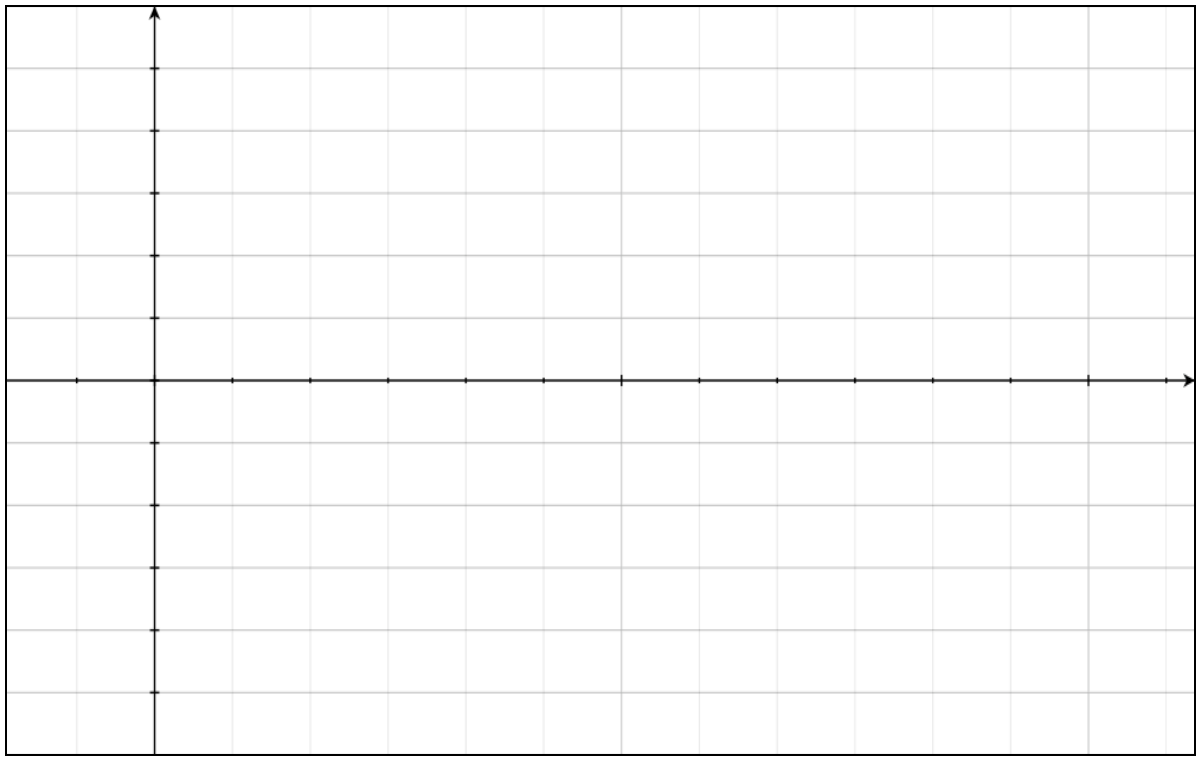
2) Find the angle θ that makes the following expression true.

$$\cos\theta = \frac{\sqrt{2}}{2}$$

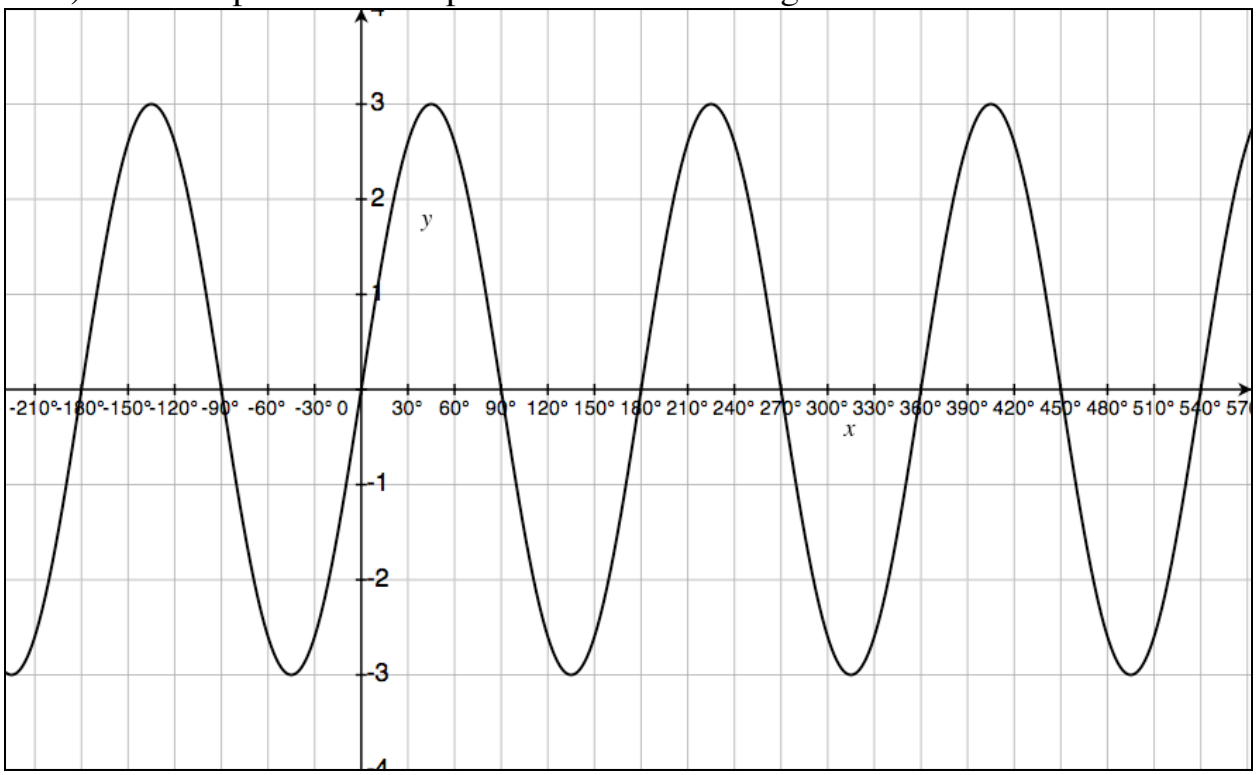
3) Find the measure of the angle labeled θ.



4) Sketch the graph of $f(x) = \sin x$



5) Find the period and amplitude of the following function.



6) Find the period and amplitude of the following function.

$f(x) = 2\sin x$

7) Find the period and amplitude of the following function.

$f(x) = 6\sin 3x$

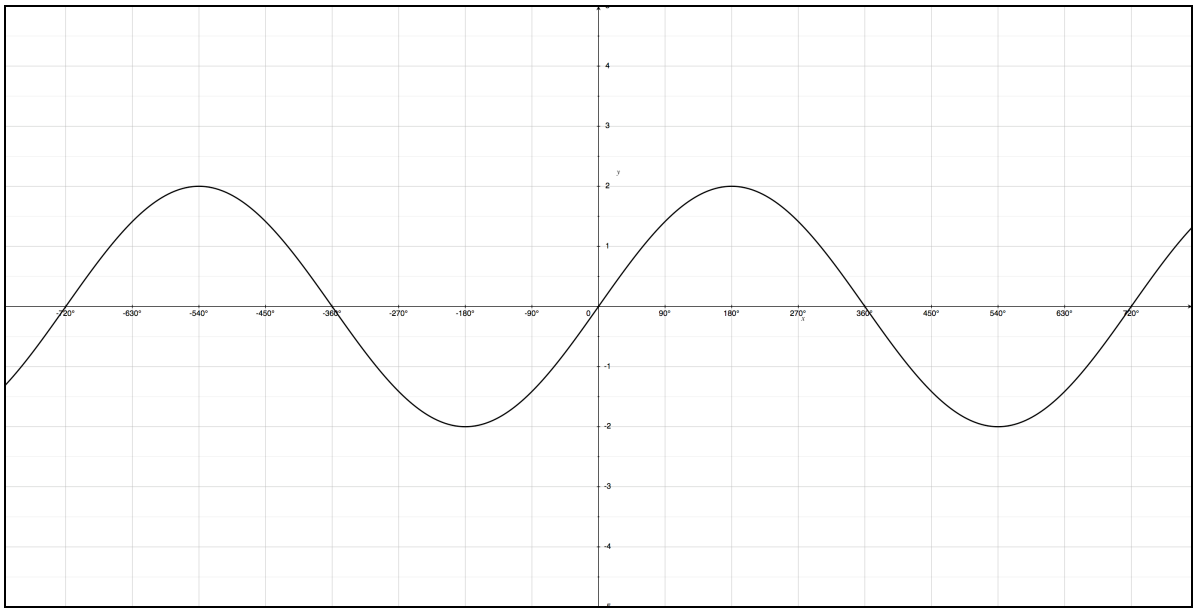
8) Circle the equation that represents the graph below.

a. $f(x) = 360 \sin 2x$

b. $f(x) = 2 \sin 360x$

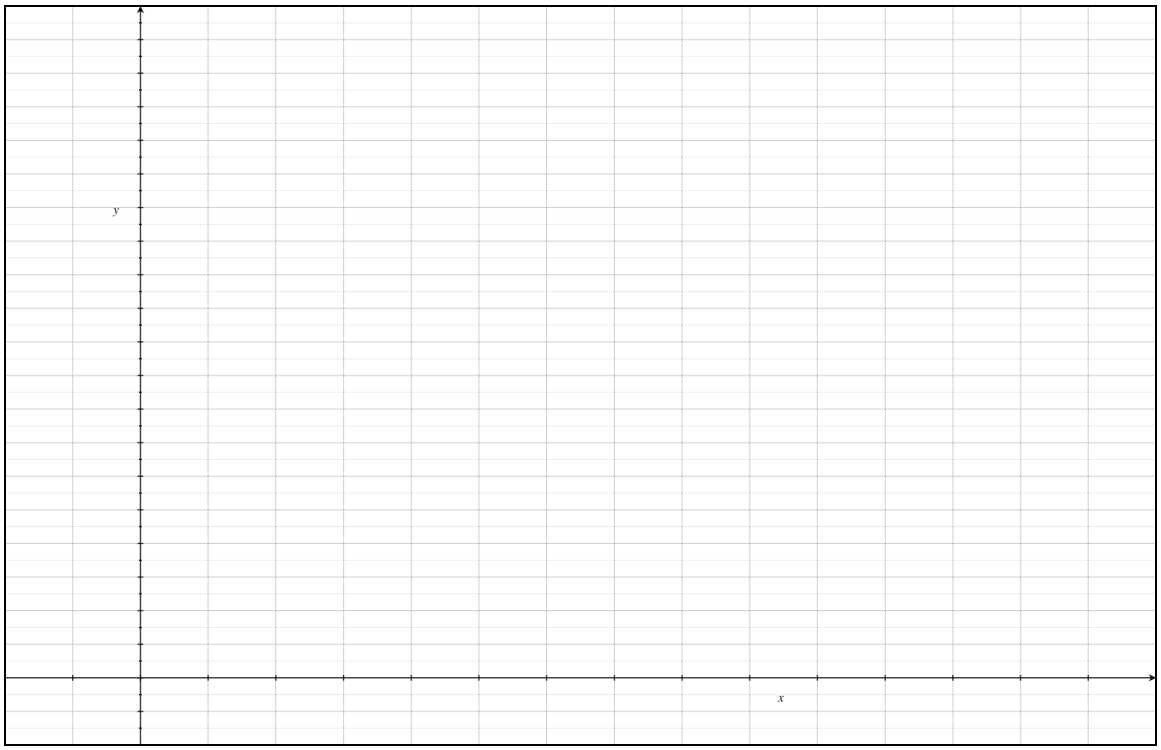
c. $f(x) = 2 \sin 0.5x$

d. $f(x) = 2 \sin 2x$



9) Consider the following situation: You get on a Ferris wheel that has a radius of 100 meters. The Ferris wheel makes one revolution every 4 minutes. Assume that you get on the wheel at a height zero and at time 0.

a. Sketch a graph of your height as compared to time on the axes provided below. Be sure the label both axes with units.



b. How high are you after 2 minutes?

c. How high are you after 3 minutes?

d. At which times will you be 150 meters high?