

## Pre-Calculus Q2 Review

Name \_\_\_\_\_

1. convert to radians

150 deg

270 deg

-30 deg

2. convert to degrees

$\pi / 2$

$5/6 \pi$

$-3/4 \pi$

3. State the amplitude and period for  $y = 4 \sin (2x)$

4. solve the triangle with sides 3, 5, and 5.8.

5. Use the unit circle to answer the following:

$\sin 30$

$\cos 120$

$\tan 180$

$\csc 45$

6. solve the triangle with  $A = 45$  degrees,  $b = 4$  and  $c = 8$

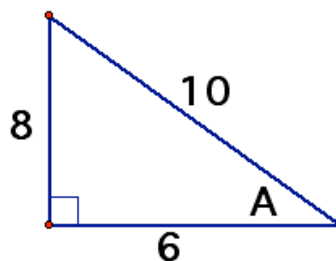
7. solve the RIGHT triangle with  $A = 39$  degrees,  $c = 6$

8. State the following for the drawn triangle:

$\sin A =$

$\cos A =$

$\tan B =$

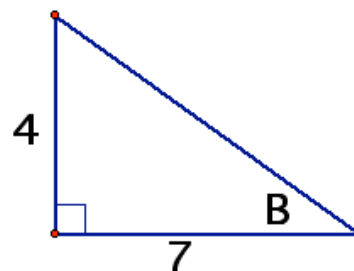


9. State the following for the drawn triangle:

$\sin B =$

$\cos B =$

$\tan B =$



10. Find  $x$  in the following in degrees and radians

$\sin x = .5$

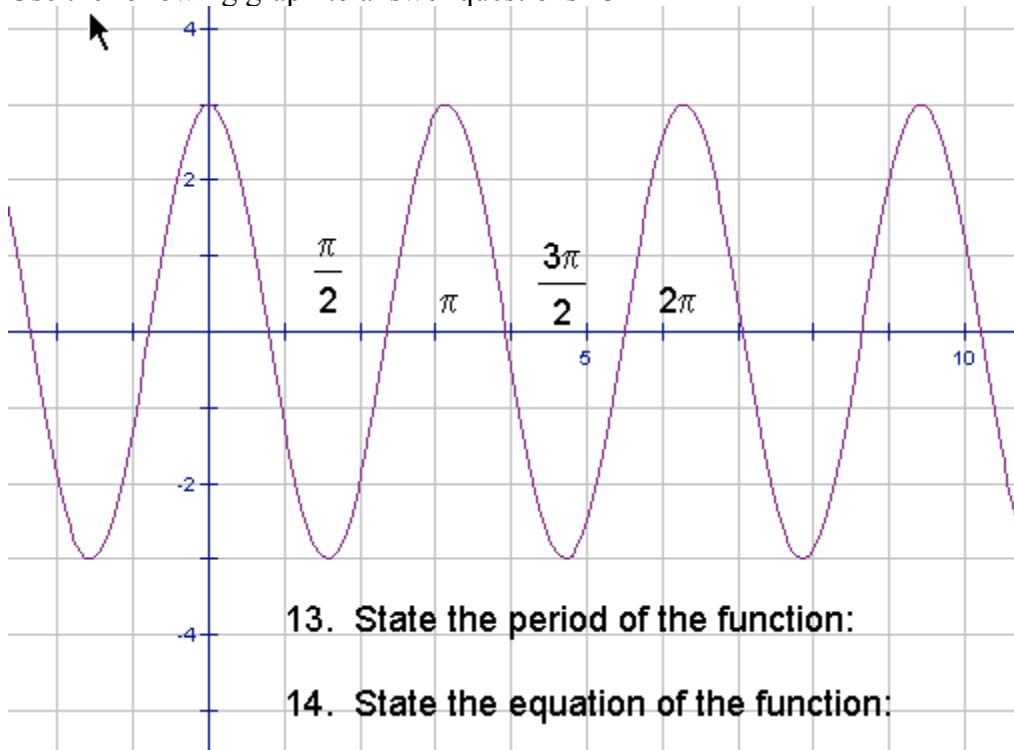
$\cos x = .5$

$\tan x = 1$

11. State the 6 trig ratios of a triangle in the standard position if the point with the coordinates (5, 12) lies on the terminal side.

12.  $\cot(\cos^{-1} \frac{1}{2}) =$

Use the following graph to answer questions 13-14



Use the function  $y = x^3 - 3x^2 + x - 3$  to answer questions 15-16

15. State the critical points and state if they are max or min values

16. State the intervals of increasing and decreasing

17. Graph the following and state all solutions between  $0 < x < 2\pi$

$y = \csc x$

$y = 2 \sin x$

18. The height of a ball is measured over time when thrown into the air.

Time (sec)	0	.2	.4	.6	.8	1
Height (ft)	5.2	18.2	27.5	29.4	19.8	6.5

Use the table of values to answer the following questions.

Write a model for the path of the ball over time

Use the model to predict the height at time = .3 seconds

Use the model to predict when the ball would reach a height of 25 feet