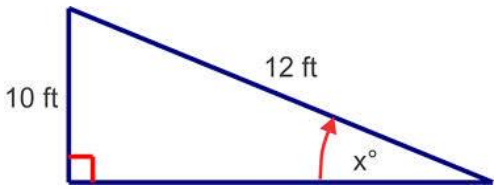
Math 3 – Unit 7 Test Review Name: _____Date: _____

Find the 6 trigonometric ratios for x.

1.



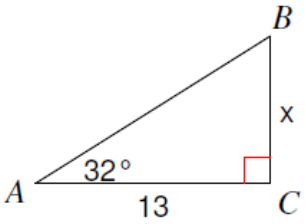
1. $\sin x =$ $\csc x =$

$\cos x =$ $\sec x =$

$\tan x =$ $\cot x =$

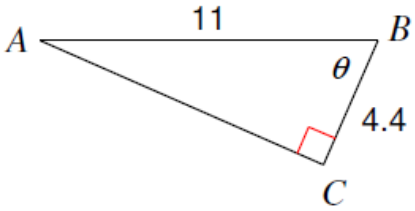
Find θ or x.

2.



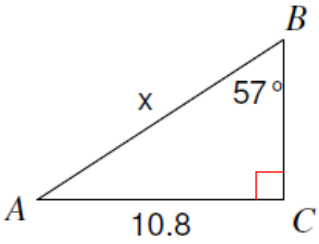
2. _____

3.



3. _____

4.



4. _____

Determine the exact value of each.

Answer Bank (#5-10)					
-1	$\frac{2}{\sqrt{3}}$	$\frac{1}{2}$	-2	$\frac{\sqrt{3}}{2}$	$undefined$

5. $\sin(120^0)$

6. $\cos(-60^0)$

5. _____

6. _____

7. $\tan\left(\frac{7\pi}{4}\right)$

8. $\sec\left(\frac{\pi}{6}\right)$

7. _____

8. _____

9. $\csc(-150°)$

10. $\cot(\pi)$

9. _____

10. _____

Convert each degree to a radian. (Give an exact answer.)

11. 70°

12. –300°

11. _____

12. _____

Convert each radian to a degree. (Round to the nearest thousandth.)

13. 3π rad

14. 90 rad

13. _____

14. _____

Find a **co-terminal angle between 0° and 360°**. Then give the **reference angle**.

15. –20°

16. 545°

15. _____, _____

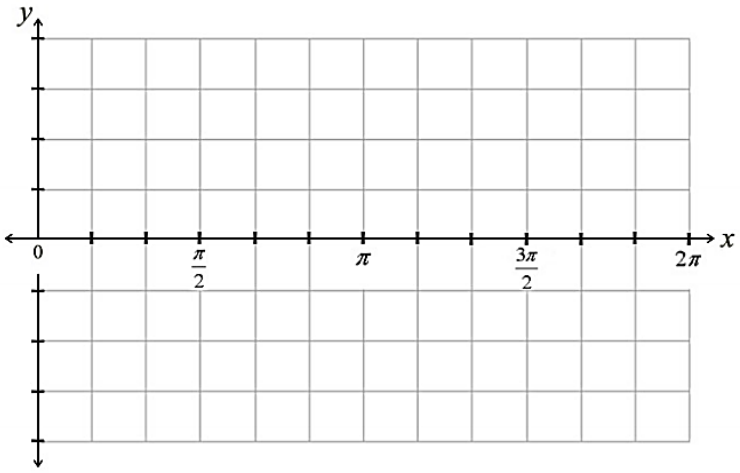
16. _____, _____

17. An ant named William started at (0, -1) on the unit circle. He traveled $\frac{4\pi}{3}$ radians counterclockwise along the edge of the circle. At what angle (radian) of the unit circle did William stop?

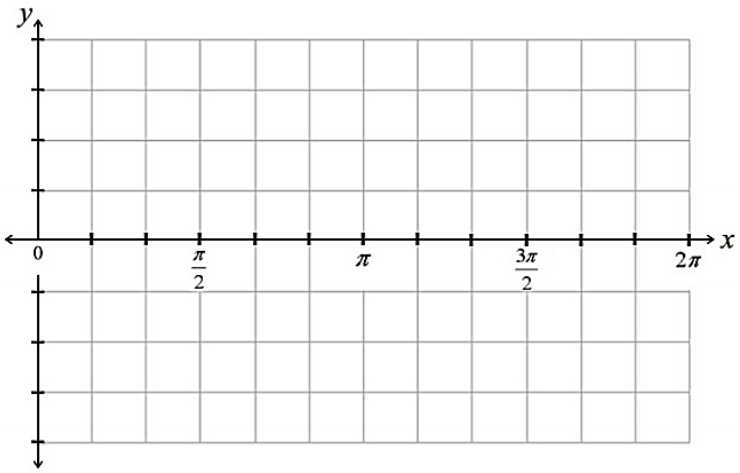
17. _____

(18-20) Graph each function from 0 to 2π. Then state the amplitude, midline, max, min, and pattern for each function.

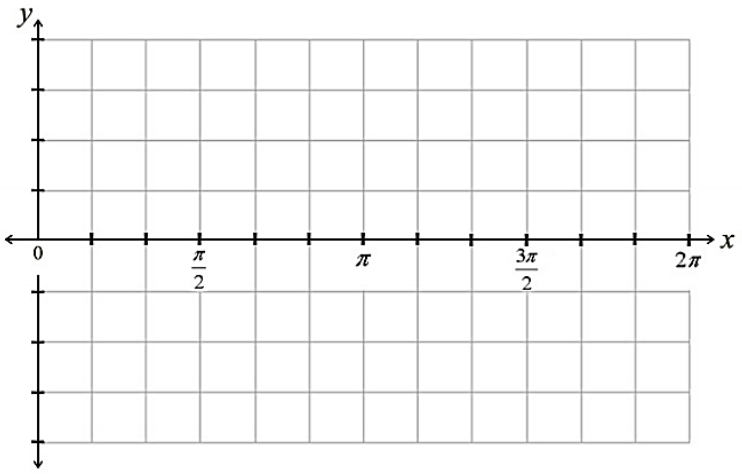
18. $y = -sinx$



19. $y = 3sinx + 1$

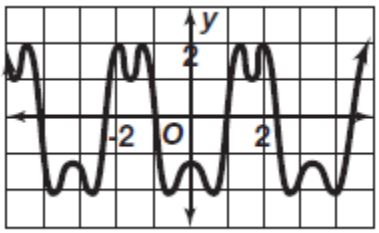


20. $y = -2cosx + 1$



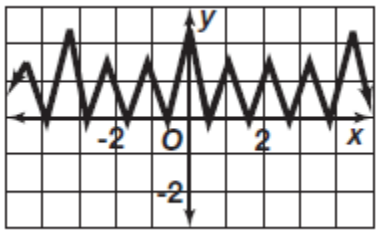
Determine if each function is periodic.

21.



Periodic? Yes No

22.



Periodic? Yes No

Write an equation for each translation.

23. $y = sinx$, flipped over x-axis, moved up 8 units

24. $y = cosx$, with an amplitude of 5, moved down 2 units

23. _____

24. _____