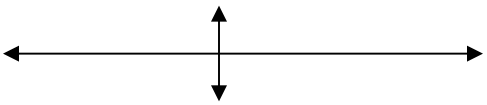
162 Test 2 Name_____

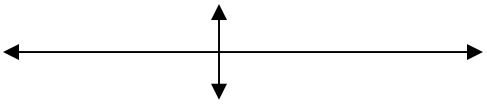
Write the exact values of the following:

1. $\sin(0) =$ _____
2. $\cos(0) =$ _____
3. $\tan(0) =$ _____
4. $\sin\left(\frac{-\pi}{3}\right) =$_____
5. $\tan(5\pi) =$_____
6. $\cos(\frac{4\pi}{3}) =$_____
7. $\cos(-\pi) =$_____
8. $\sin\left(-\frac{3\pi}{4}\right) =$_____
9. $\sin\left(\frac{\pi}{6}\right) =$_____
10. $\cos\left(\frac{3\pi}{4}\right) =$_____

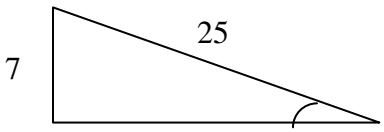
11. The domain of sine is _____ and the range is _____
12. The domain of cosine is _____ and the range is _____
13. If $\sin(\theta) = .4$ then $\sin(-\theta) =$ ____
14. Graph $y = \sin(x)$



15. Graph $y = \cos(x)$



16. Find the sine of the angle shown.



17. Referring to the above picture, find the tangent of the angle shown.

18. Find the cosine of the angle shown.

19. Without doing any more work, find $\tan\left(\sin^{-1}\left(\frac{7}{25}\right)\right)$ and $\cos\left(\sin^{-1}\left(\frac{7}{25}\right)\right)$

20. Find the radian measure of that angle. (Use a calculator.)

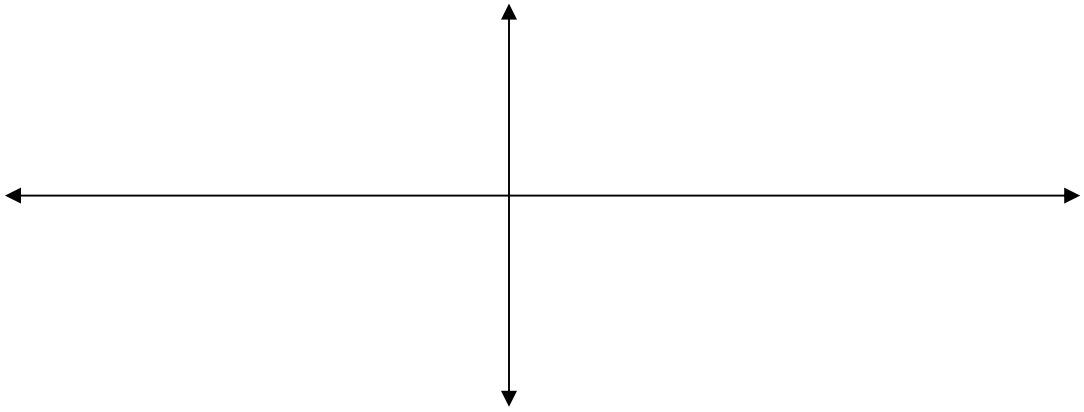
21. Write the algebraic expression that is equivalent to $\tan\left(\sin^{-1}\left(x\right)\right)$

For problems 22 through 24 let $f(x) = 3\sin\left(\frac{\pi}{2}x\right)$

22. What is the amplitude of the function?

23. What is the period of the function?

24. Graph the function below. Be sure to label the *x*-axis at the appropriate points.



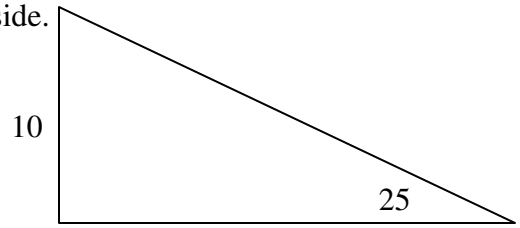
25. The domain of arcsine is _____ and the range is _____.

26. The domain of arccosine is _____ and the range is _____.

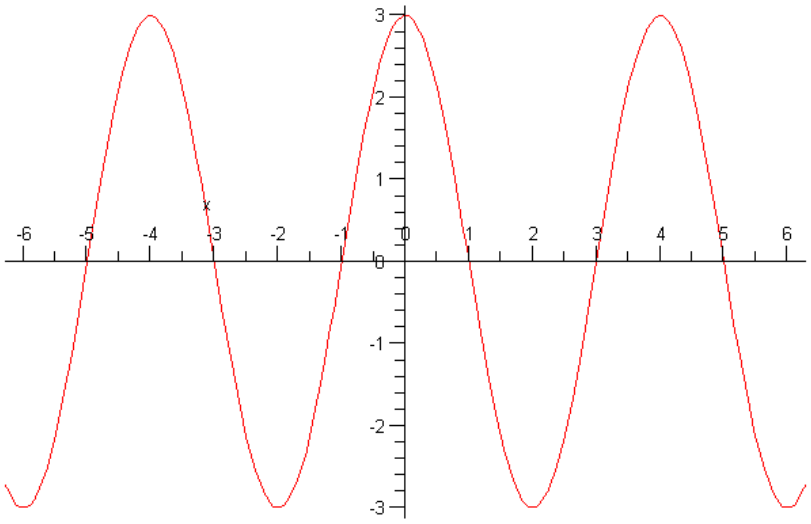
27. $\sin^{-1}\left(\frac{\sqrt{2}}{2}\right) =$ _____

28. $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right) =$ _____

29. The acute angle is 25 degrees and the opposite side is 10. Find the length hypotenuse and the length of the adjacent side.



30.



In the graph above the amplitude is _____ and the period is _____

31. This could be the graph of what function?

32. Solve the triangle with angle A = 40^o angle B = 50^o and side b = 10. Please draw a reasonable triangle as a guide.

A = 40^o a = ____

B = 50^o b = 10

C = _____ c = ____