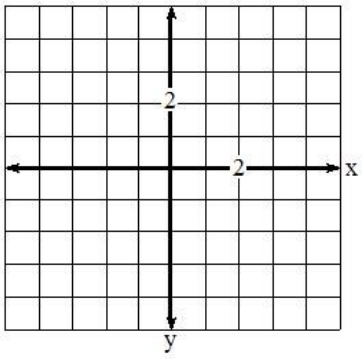
Name: Class Period:

SM3 Worksheet 6.D ~ Solving Trig Equations

Problems 1-10: Find all solutions of the equation on $0 \le x < 360^o$ and $0 \le x < 2\pi$.

1. sinx = 1/2	2. cosx = -1/2
3. $tanx = \sqrt{3}$	4. $cscx = -\frac{2}{\sqrt{3}}$
5. $2sinx - \sqrt{3} = 0$	6. $2cosx = 1$
7. $2sin^2x - 1 = 0$	8. $secx = -2$
9. $3tan^2x - 1 = 0$	10. $4cos^2x = 1$
11. Simplify: $5\sqrt{6} \cdot 2\sqrt{3} + \sqrt{50}$	12. Solve for x. $\frac{2}{x} + \frac{5}{a} = \frac{7}{x}$

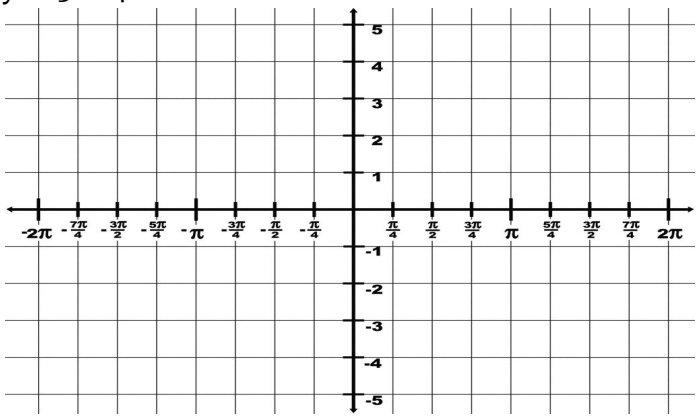
13. Write the equation of a polynomial that has a solution at -2 and 3 and complex solutions of 3i and -3i. Then sketch the graph of your polynomial using the coordinate plane to the right.



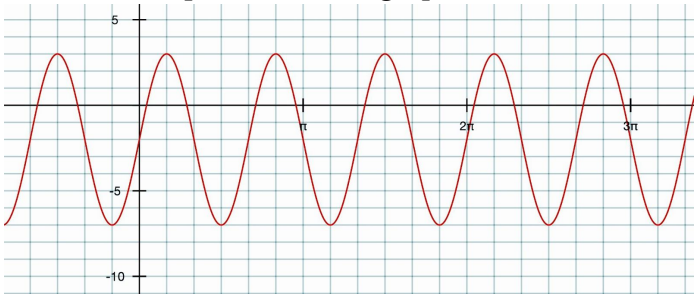
14. Is the Function $y = -2\cos x$, EVEN or ODD?

15. Given the $\sec\theta = 5/4$ and $\sin\theta < 0$, find $\tan\theta$. *(Hint: what quadrant are you in?)*

18. Graph
y = -3sin4x



19. Write an equation for the graph below:



20. Given $\theta = 3\pi/2$, find the values of all 6 trig functions.

21.

Xavier cannot walk from point A to point B because there is a pond in the way. Instead, he starts by walking at an angle of 30° from the direct path, then makes a 90° turn, and finally walks 40 feet to reach his destination.

If Xavier were able to take a direct path, how far would he walk?

(A) 20 feet

(B) $40\sqrt{2}$ feet

(C) $40\sqrt{3}$ feet

(D) 80 feet

22. Is the function $y = x^3$, EVEN or ODD?