Name: _____ Class: _____ Date: _____ ID: A

Unit #2 Practice Test-Solving and Graphing One and Two Variable Equations and Functions

Problem

1. **For each of the following equations, please solve for the indicated variable. Please show all of your work and put your answers as well as your work on the solution set sheet.**

   1. Solve $3+x-10+4x=28$ for x.

2. Solve $4x+6-2x=6x+30$ for x.

3. Solve $8(1+5y)+5=13+5y$ for y.

4. Solve $-8x-4y=-24$ for y.

5. Solve $3x+27y+9=18-6x+9y$ for x.

6. Solve $4(2y-2)-3x=-5x+6y-12$ for y.

7. Solve $5(y+3)+6x=3(3x+2)-y$ for x.

8. **For the following equation/function please solve for the variable, then graph then function, and find the x and y intercepts of the equation/function.**

   8. $3(2y-1)-2y+5=3y+6$

9. $5(2x+6)=8x+20+3x$

10. **For the following equation/function please convert equations from Standard form ($Ax+By=C$) into Slope-Intercept Form ($y=mx+b$), then graph then function, and find the x and y intercepts, slope, and the domain and range of the function. (Y+MX+B METHOD.)**

    10. $-8x+4y=-16$

11. **For each of the following equations/functions please graph the equations/function using your x and y intercepts and then based on the graph give me domain, range and slope of the equation/function.**

    11. $-4x+5y=-40$

12. **For the following equation/function please graph the equation using the method of your choice. After graphing the equation/function find the x and y intercepts, slope, and domain and range. (METHOD OF YOUR CHOICE.)**

    12. $-4x+2y=-12$

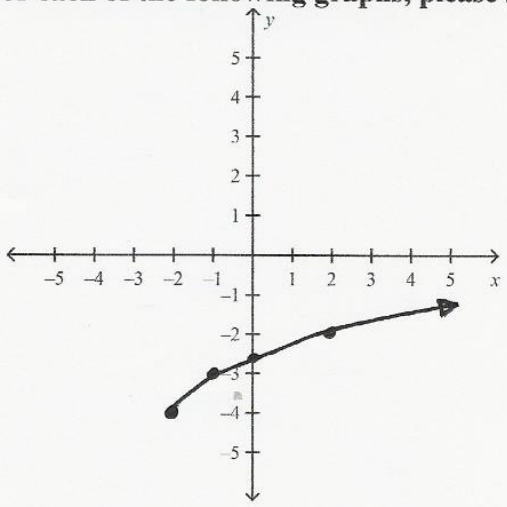
13. $-12x - 8y = -48$

14. **Please graph the following functions $f(x)$ and give me the domain and range of the function.**

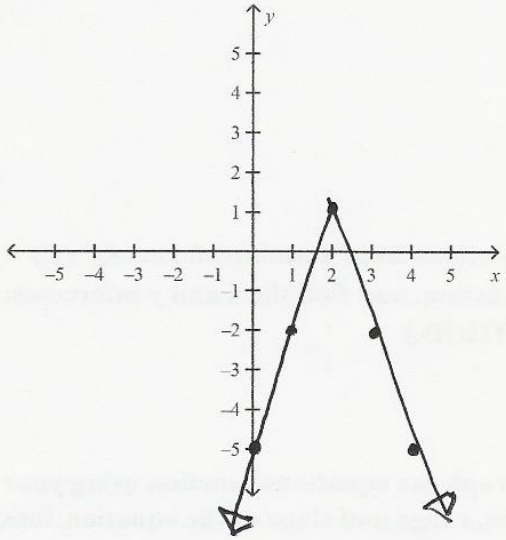
    14. $f(x) = 3x^2 - 1$

15. $f(x) = 2|x| - 3$

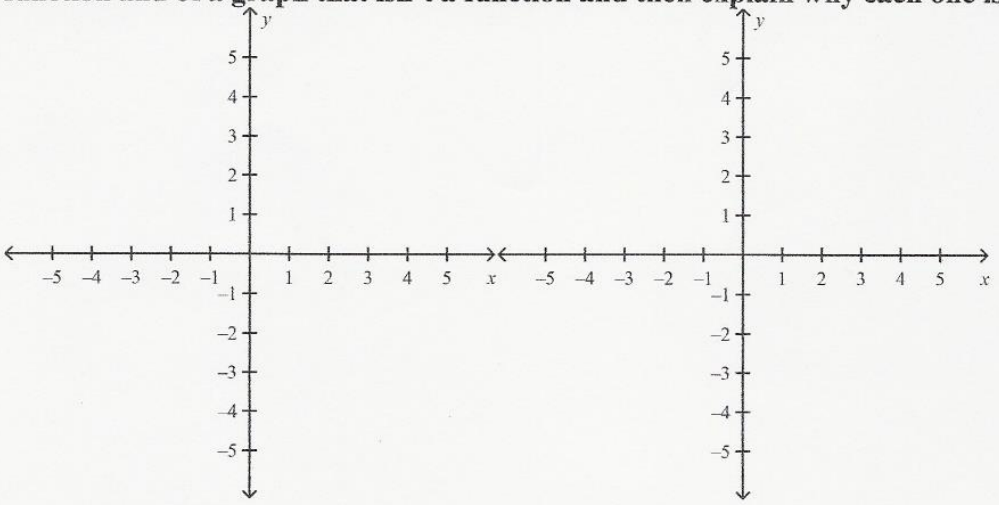
16. **For each of the following graphs, please state the domain and range of the function.**



17.



18. **For the following question please give me different examples than seen on this test, of a graph that is a function and of a graph that isn't a function and then explain why each one is or isn't a function.**



19. **BONUS PROBLEM:**

Solve the following formula for r.

$$V = \frac{1}{3}\pi r^2 h$$