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

Unit #1-Part #1-Test Review Assignment #2: Solving and Graphing Linear Equations and Applications (Reference: Lesson #7,#8,#13 and #34 in book)

Problem

1. **Solve each of the following equations for the indicated variable. (Show all of your work.)**

   1. Solve $5(2x+3)-4x=8x+27$ for x.

2. Solve $3(y+3)-2y=4(2y+1)-9$ for y.

3. Solve $x-6y=30$ for x.

4. Solve $-6x-3y=18$ for y.

5. Solve $4x-9y=21+x$ for x.

6. Solve $3(y-3)-2=3x-6y+16$ for y.

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

8. **Solve each of the following word problems by creating a direct variation equation and then solving each of the equation for what is specified in the question.**

   8. The amount of dirt needed to cover a garden varies directly with the area of the garden. If 2 bags of dirt are needed to cover a garden with an area of 54 square feet, how many bags are needed to cover a garden with an area of 135 square feet?

9. When an item of clothing is on sale with a percent discount, the sale price varies directly as the original price. If a shirt normally priced at $30 is on sale for $21, what is the sale price (under the same discount structure) of a shirt normally priced at 40?

10. **For each of the following equations please graph using the X-Y Chart Method to get points for the graph, then find the slope and x and y intercepts.**

    10. $2x+y=10$

11. **For each of the following equations please graph using the X and Y Intercept Method and then find the slope of the equation.**

    11. $-4x+2y=12$

12. **For each of the following equations/functions please convert equations from Standard form ($Ax + By = C$) into Slope-Intercept Form ($y = mx + b$), then graph then function or equation and find the x and y intercepts and slope of each function or equation.**

    12. $6x + 2y = -8$

13. **For each of the following equations/functions please graph the equations using the method of your choice. After graphing each equation/function find the x and y intercepts and slope.**

    13. $3x - y = -9$

14. $-6x + 3y = 18$

15. **For each of the following equations/functions please solve for the variable, then graph then function or equation, and find the x and y intercepts of the function or equation.**

    15. $2(2y - 3) - 2y + 4 = 4y + 6$

16. $8(x - 2) - 4x + 8 = 3(x - 2) + 3x - 6$