Algebra II- Mrs. Tilus Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 2 Review

1. Match each term with the correct example.

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| A. Parallel Lines | $$-5x+6y=14 and-6x-5y=26$$ |   |
| B. Line with a negative slope.  | Slope is zero, $ y=7$ |  |
| C. Perpendicular Lines  | $$-\frac{2}{3}x-y=12$$ |  |
| D. Point/Slope form for a line  | $x=3$ and m is undefined  |  |
| E. Horizontal Line | $$-6x+4y=32$$ |  |
| F. Line with a positive slope.  | $$\frac{y\_{2}-y\_{1}}{x\_{2}-x\_{1}}$$ |  |
| G. Standard Form for a line | y = mx + b |  |
| H. slope | $$y-y\_{1}=m(x-x\_{1})$$ |  |
| I. Vertical Line | $$-3x-33=y and y=-3x+12$$ |  |
| J. Slope/intercept form for a line | Ax + By = C |  |

2.  Find the Domain and Range.

 a.) b.)

 Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Consider the relation: The distance you are from the band and how loud it sounds to you.

a.) Identify the Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Identify the Dependent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b.) Sketch a reasonable graph **AND** label the axes appropriately.

4. Answer yes or no if each of the following is a function.

a.) {(-2, 4) (-1, 1) (1, 1) (2, 4)} function?\_\_\_\_\_\_\_\_\_\_

b.) {(4, -2) (1, -1) (1, 1) (4, 2)} function?\_\_\_\_\_\_\_\_\_\_

c.) {(a, b) (a, c) (b, a) (c, b)} function?\_\_\_\_\_\_\_\_\_\_

5. Answer yes or no if each of the following is a function.

 a.) b.) c.)

function?\_\_\_\_\_\_\_\_\_\_ function?\_\_\_\_\_\_\_\_\_\_ function?\_\_\_\_\_\_\_\_\_\_

6. Use the functions below to complete the **ordered pair.**

Let: $f\left(x\right)=2x^{2}-6$

 $g\left(x\right)=5-x$

 $h\left(x\right)=|-6x+2|$

 a.) $ f(3)$ b.) $ h(-12)$ 6a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 6b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c.) $g(-9)$ d.) $g(3-b)$ 6c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 6d. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Graph each equation by first finding the x and y intercepts.

 a.) -6x + 3y = 12 x-int = (\_\_\_\_, \_\_\_) b.) 2x + 4y = 16 x-int = (\_\_\_\_, \_\_\_)

 y-int = ( \_\_\_, \_\_\_\_) y-int = ( \_\_\_, \_\_\_\_)

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8. Find the slope in each situation.

 a.) $2x=10$ b.) $-3x+6y=13$ 8a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 8b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 c.) The line containing the points d.) $-2y=20$ 8c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (3, -4) and (6, 8)

 8d. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A line with the y-intercept = 1 and x-intercept = $-4$ 8e. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Graph each equation. Show all of your work (show me your substitution (or) y-intercept and slope).

 a.) $-3x+6y=24$ b.) $y=\frac{-2}{3}x+5$

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10. Find an equation in **slope/intercept form or standard form** of the line that passes through

(-2, 6) and (0, 3).

 10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. Find an equation in **slope/intercept form or standard form** of the line containing point P (-2, 5) and having slope m = $\frac{-3}{4}$

 11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Consider the line: $-2x – 7y = 28.$

 a.) What is the slope of a line that is parallel to the given line? 12a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b.) What is the slope of a line that is perpendicular to the given line? 12b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. Find equations in **slope/intercept form or standard form** of the lines go through point $P(0, -5)$ and that are parallel and perpendicular to line L

 L: $y=\frac{3}{4}x+2$

Parallel: Perpendicular:

14. Graph the solution to each inequality.

 a.) $6x+18y > 36$ b.) $3x-4y\geq 0$

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15. Find the domain and range for each of the following

 a.) $f\left(x\right)=x^{2}+3$ 15a. Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 b.) $f\left(x\right)=|x-4|$ 15b. Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 $c.) f\left(x\right)=\sqrt{x+2}-6$ 15c. Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_