LINEAR FUNCTIONS PRACTICE TEST

Determine if the given ordered pair is a solution to the function: $3x - 2y = 8$

1) $(-3, 4)$

Complete the given ordered pairs so that each ordered pair satisfies the given equation.

2) $(2, \quad), (\quad, -3), \quad y = -3x + 6$

3) What is the formula for finding the slope of a line?

4) The slope of a vertical line is _____.

5) The slope of a horizontal line is _____.

6) The slope of the y axis is _____, and the slope of the x axis is _____.

Find the slope of the line containing the following points.

7) $(-3, 2), (7, 12)$ **8)** $(4, -2), (-3, 5)$ **9)** $(-3, 2), (-3, -2)$

10) What can you say about the slopes of parallel lines?

11) The slope of line 1 is $\dfrac{2}{3}$. Line 2 is perpendicular to line 1. What is the slope of line 2?

12) How are the slopes of perpendicular lines related?

13) What is the Slope Intercept Form of a line?

14) What is the Standard Form of a Line?

15) What is the Point-Slope form of a line?

16) When writing the equation of a line in standard form, what two restrictions must be satisfied?

17) Find the equation of a line, in standard form that passes through the points…

A) $(-3, 2), (7, 12)$ **B)** $(0, -3), (7, -8)$ **C)** $(-3, 2), (-3, -2)$

18) **Find the equation of the line that is perpendicular to** $y = -\dfrac{2}{3}x + 7$, **and contains the point** $(-2, 5)$.

Slope-Int Form:

Standard Form

19) **Find the equation of the line that is parallel to** $y = -\dfrac{2}{3}x - 2$, **and contains the point** $(5, 8)$.

Slope-Int Form:

Standard Form:

20) **Find the equation of the vertical line passing through (2,-4).**

21) **Find the equation of the horizontal line passing through (8,6).**

22) **Find the equation of the vertical and horizontal lines that intersect at (-3,5).**

23) **Where do the lines** $x = 4$ **and** $y = -2$ **intersect?**

24) **Find the distance of the line segment that has the following endpoints.** $(-2, -3)$, $(4, 3)$

25) Given $f(x) = 3x - 6$, $g(x) = x - 12$, **and** $h(x) = -2x - 5$ **find each of the following.**

a) $f(a + b)$

b) $g(3x + 2)$

c) $h(x - 12)$

d) $f(g(x))$

e) $f(2) + g(2) + h(2)$

f) $(f + g)(6)$

Complete the table for each of the following functions:

26) $f_{(x)} = 3x - 5$

x	−2	-1	0	1	2	3
$f_{(x)}$						

27) $f_{(x)} = -3x + 1$

x	−2	-1	0	1	2	3
$f_{(x)}$						

28) Find the equation of the function yielding the following results.

x	−2	-1	0	1	2	3
$f_{(x)}$	7	5	3	1	-1	-3

$f_{(x)} =$

29) Find the equation of the function yielding the following results.

x	−2	-1	0	1	2	3
$f_{(x)}$	-13	-8	-3	2	7	12

$f_{(x)} =$