Algebra I

Name: _____

Chapter 5 Test Study Guide

SHOW ALL YOUR WORK

Formulas:

Slope: _____

Slope-Intercept: _____

Point-Slope: _____

Standard: _____

Directions: Find the slope given two points. Use the slope formula! Show your work and reduce fractions!

1.) $(4, -6)$, $(2, -8)$ **2.)** $(3, -4), (3,6)$ **3.)** $(2,5), (-8,5)$

Directions: State whether the slope is 0 or undefined.

4.) A vertical line has a(n) _____ slope.

5.) A horizontal line has a(n) _____ slope.

Directions: Identify the slope and y-intercept from each equation. *(HINT: make sure equation is in slope intercept form)*

7.) $y = 4x - 5$ **8.)** $-3x + y = 4$ **9.)** $y + 4 = \frac{1}{3}x + 1$

Directions: Write an equation for the line in slope-intercept form.

10.) $m = 2, b = 3$ **11.)** $(0, -5), m = -3$ **12.)** $(1,7), m = 3$

<u>Directions</u>: Find the *x-* and *y-intercepts (in coordinate point form)* of each equation

13.) $x + 3y = -6$
x-intercept: _____
y-intercept: _____
work:

14.) $-2x + 4y = 12$
x-intercept: _____
y-intercept: _____
work:

<u>Directions</u>: Write the following equations in <u>Standard Form</u> using *integers*.

15.) $y = \frac{1}{4}x + 4$

16.) $y = -\frac{3}{4}x - 4$

<u>Directions</u>: Tell whether the lines for each pair of equations are *<u>parallel, perpendicular, or neither</u>*. EXPLAIN.

17.) $y = 3x - 8$
$3x - y = -1$

18.) $3x + 2y = -5$
$y = \frac{2}{3}x + 6$

19.) $y = \frac{5}{2}x + 11$
$-5x + 2y = 20$

<u>Directions</u>: Write an equation in slope-intercept form for a line that is <u>parallel</u> to the given line and passes through the given point.

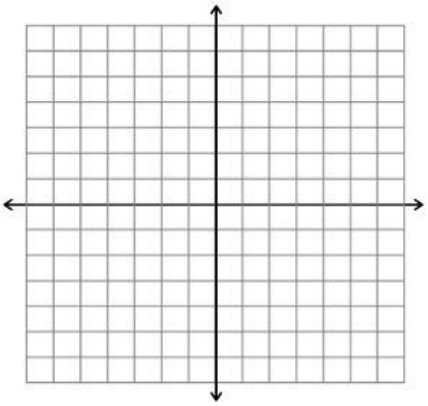
20.) $y = 2x - 7; (3,4)$

<u>Directions</u>: Write an equation in slope-intercept form for a line that is <u>perpendicular</u> to the given line and passes through the given point.

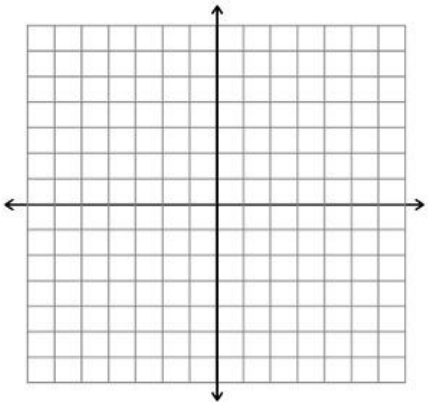
21.) $y = 3x - 2; (6,4)$

<u>Directions</u>: Graph the following lines.

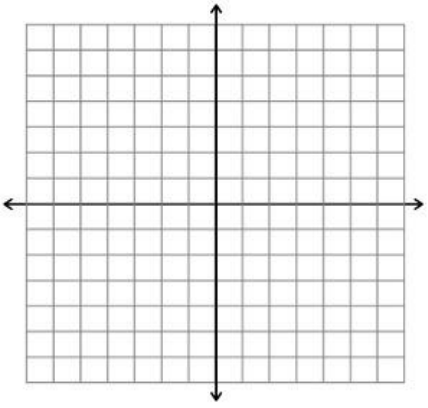
22.) $y = -5$



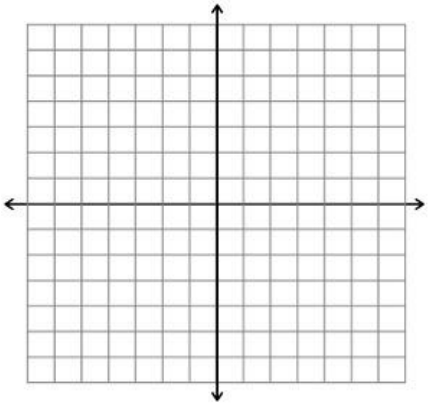
23.) $y = 3x - 4$ *(Use m & b)*



24.) $4x + 8y = 24$ *(Use Intercepts)*

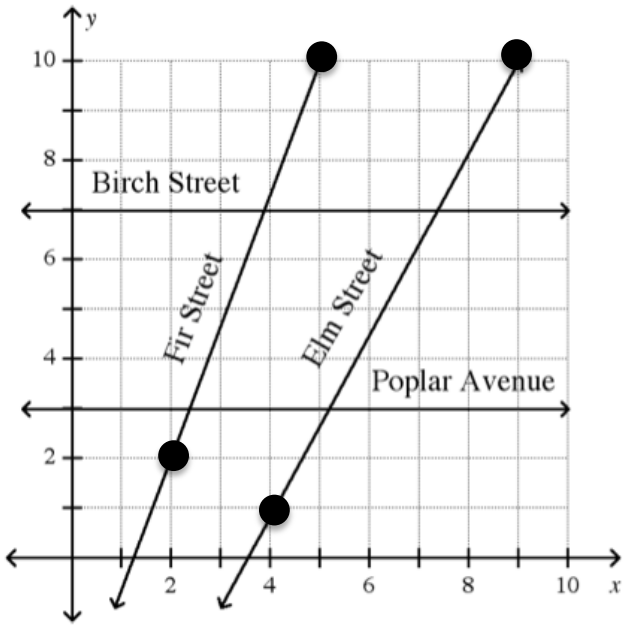


25.) $x = 3$



Directions: Use the map to answer the questions. Show all your work!

26.)



a.) What is the slope of the line representing Fir Street?

b.) Show that Poplar Avenue and Elm Street are NOT perpendicular. ***Show your work AND explain.*** *(HINT: Find the slope of the 2 lines first)*

c.) Are Fir Street and Elm Street parallel? ***Show your work AND explain.***
(HINT: Find the slope of the 2 lines first)

****** You will also have questions relating back to material from Chapters 2 and 3.******