Name _____ Period _____

<u>**Summative Assessment**</u>

F-IF.4 Interpret key features of a function graphically

A-REI.12 Graph the solutions to linear equations and inequalities in two variables

BF.A.1 Building Functions

Slope-Intercept Form Review

Calculations

Total

8A Unit 2 Pre-Test & Study Guide
CALCULATOR ALLOWED

BE SURE TO SHOW WORK TO JUSTIFY YOUR ANSWERS!

1. A) Rewrite the equation $14x-12y=42$ in slope-intercept form review)

$$y = \frac{7}{6}x - \frac{7}{2}$$

or $-3\frac{1}{2}$ or -3.5

B) Identify the slope and y-intercept. (slope-intercept form review)

$m = \frac{7}{6}$ Not $\frac{7}{6}x$

$b = -\frac{7}{2}$ or -3.5 or $-3\frac{1}{2}$

C) Create a real world situation that is realistic and represents the slope and the y-intercept. (slope-intercept form review)

answers will vary
I dropped 3½ pounds of cake mix on the ground. To make up for it I remade 7 pounds every 6 hours.

2. Write an equation of a line that rises from left to right. (F-IF.4)

anything when m is positive

ex) $y = 2x + 4$

6. Find the value of x so that the function has the given value. Show work. (F-IF.2)

$g(x) = 102x - 7.98; -39.6$

$$X = -.31$$

7. On January 1, Mary had a savings account balance of $1,527 and by April 1, her balance had increased to $2,478. What was her average rate of change? Be sure to include units in your answer. Show work. (BF.A.1)

$$\$ 317 / month$$

Labels count

8. In 1998, the population of Bakersfield was 32,956, and it has been <u>decreasing</u> by 620 people each year.
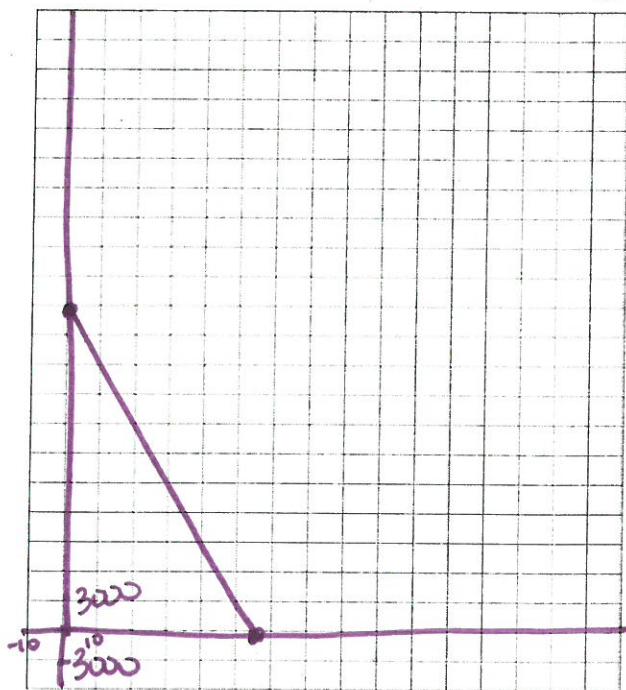
a) Write an equation to show the indicated relationship. (BF.A.1)

$$y = -620x + 32956$$

b) Graph the equation. (A-REI.12)

c) Find the slope and y-intercept. (F.IF.4)

$$m = -620 \rightarrow no \ x \ !!$$
$$b = 32956$$

Intervals
no arrows
Straight

Name _____ Period _____

9. Your school biology club is organizing a pancake breakfast to raise $400 for a trip to an aquarium. The club decides to charge $2 for each child's ticket and $5 for each adult's ticket.
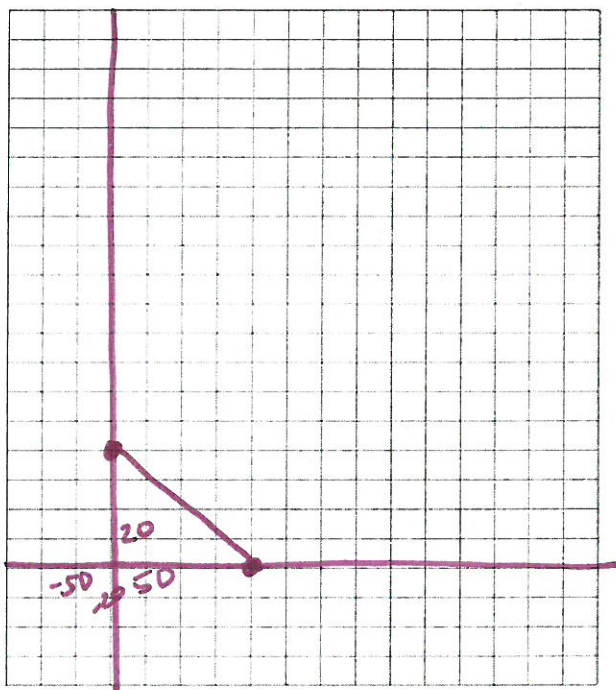
a) Write an equation to show the indicated relationship. (BF.A.1)

$$2x + 5y \geq 400$$

* can earn more than 400 but not less

b) Graph the equation using x- and y- intercepts only. (A-REI.12)

$\cancel{x}$: (200,0)   (0,80)

no arrows
intervals
x & y intercepts only
straight

Name _____ Period _____

F-IF.4 Interpret key features of a function graphically

A-REI.12 Graph the solutions to linear equations and inequalities in two variables
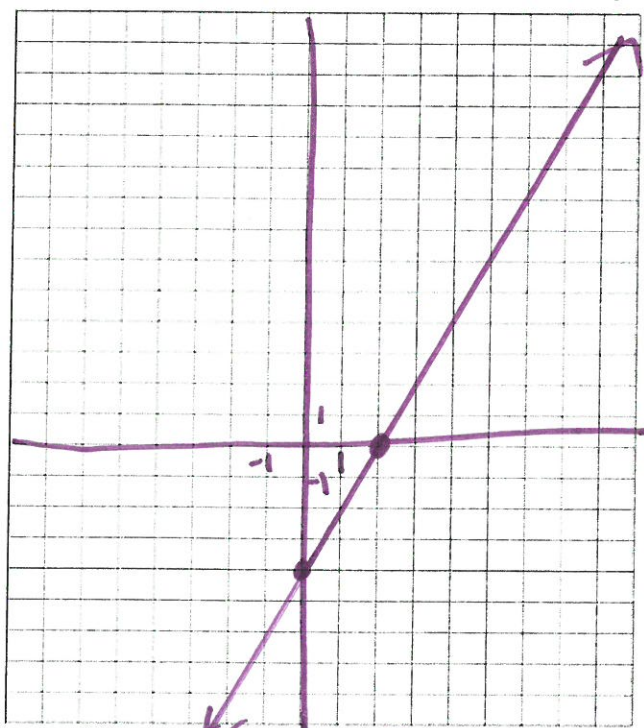
BF.A.1 Building Functions

Slope-Intercept Form Review

Calculations

Total

8A Unit 2 Studyguide and Pre-test
NO CALCULATOR ALLOWED

1. A) Graph the equation below. $4x - 2y = 8$ (A.REI.12)
   B) Identify the intercepts. (F.IF.4)

(2, 0)

(0, -4)

intervals
arrows
straight
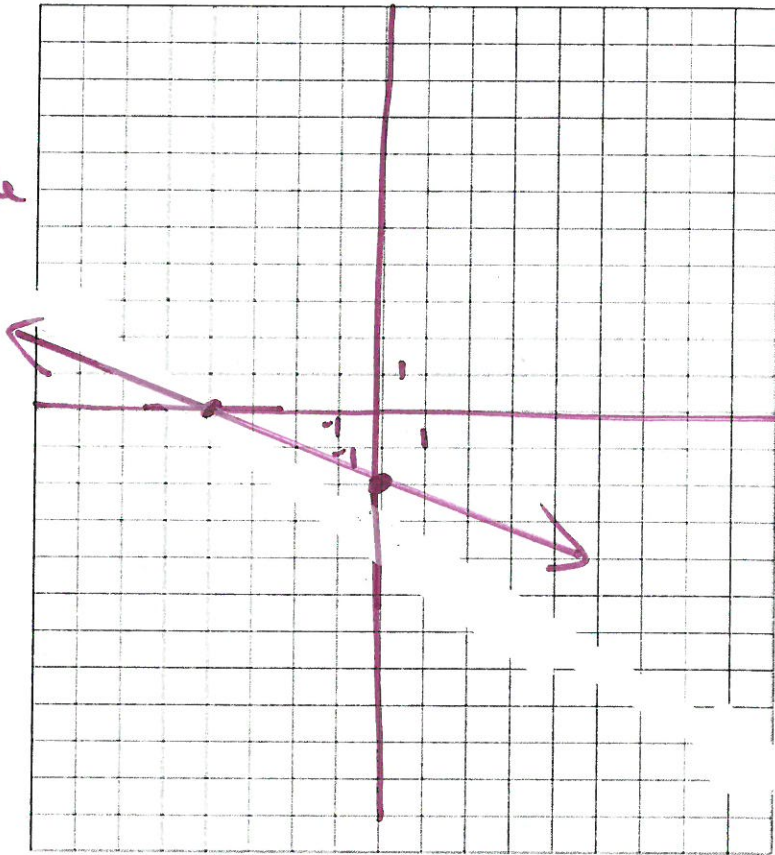continuous
~~intervals on~~
straight

Name _____ Period _____

2. Graph the line using any method you've learned. Show any work. (A.REI.12)

$$2x + 4y + 8 = 0$$

$(-4, 0)$ $(0, -2$
or
$$y = -\frac{1}{2}x + 2$$
or
make x/y table

arrows
intervals
straight

Name _____ Period _____

For 3 and 4, determine if each is true or false. If false, correct the statement to make it true.

3. The equation y = -2 creates a line with undefined slope. (F.IF.4)

TRUE   (FALSE)

4. The equation $y = -\frac{2}{3}x + 5$ creates a line that rises from left to right. (F.IF.4)   *decreases*

TRUE   (FALSE)

5. Write the equation of a horizontal line passing through the point (8,0)   (F.IF.4)

$$Y = 0$$

6. Find the slope of the line passing through the points (-2, 3) (4, 10). Show work. (Slope-intercept form review)

$$\frac{7}{6}$$

7. Write the equation of the line passing through the points (3,0) and (8, 2). Show work. (BF.A.1)

$$Y = \frac{2}{5}x - \frac{6}{5}$$

8. Write the equation of the line that passes through $F(3) = -6$ and $F(2) = -8$. Show work. (BF.A.1)

$$y = 2x - 12$$

9. Compare the parent function with $p(x) = 4x+6$ without graphing.(transformations)

Vertical stretch baf 4
translate up 6

10. Compare the parent function $g(x) = -\frac{1}{2}x$ without graphing. (transformations)

vertical shrink baf $\frac{1}{2}$
reflection

11. Compare the parent function with $h(x) = 2.3x-4$ without graphing. (transformations)

Vertical stretch baf 2.3
translate down 4

12. Determine whether each equation represents direct variation. Show work. (BF.A.1))
a) $2x = -3y+4$ b) $12x-16y = -4$ c) $-3x-2y = 6$

NO   NO   NO

13. Write a direct variation equation when $x = 6$ and $y = -2$. Show work. (BF.A.1)

$$y = -\frac{1}{3}x$$