Name_____

1) Find the average rate of change of the function $f(x) = 3x - 2$ over the interval, $1 \le x \le 6$?

2) What is the equation of the line that passes through the point (-2, -8) and has a slope of 3?

  (1) $y = 3x - 2$ (3) $y = -3x + 2$
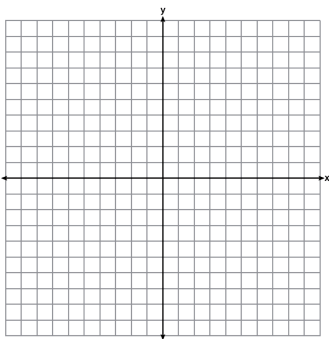
  (2) $y = 3x - 22$ (4) $y = 3x + 22$

Graphing Linear Functions in Slope-Intercept Form

Identify the slope and the y-intercept and graph the line. Is the graph proportional or non-proportional?
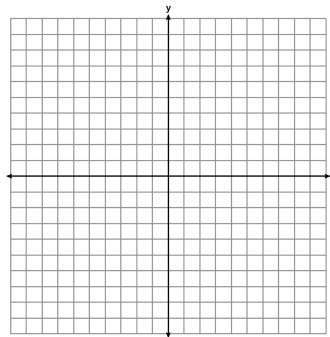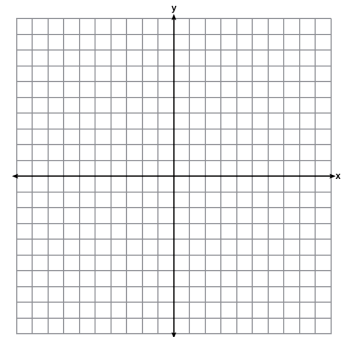
| 3) $y = -2x + 7$ m = _____ b = _____	4) $y = \frac{2}{3}x$ m = _____ b = _____	5) $y - 3x = 6$ m = _____ b = _____
Proportional or Non-Proportional	Proportional or Non-Proportional	Proportional or Non-Proportional
6) $3y - 3x = 18$ m = _____ b = _____	7) $6x - 4y = 20$ m = _____ b = _____	8) $2y = -x$ m = _____ b = _____
Proportional or Non-Proportional	Proportional or Non-Proportional	Proportional or Non-Proportional
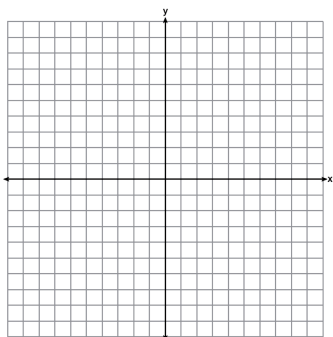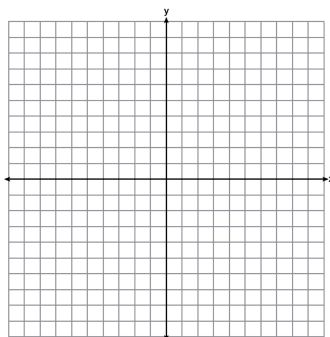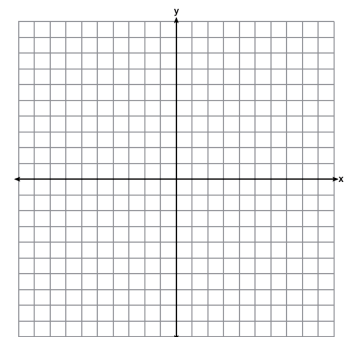
Writing Equations of Linear Functions in Slope-Intercept Form

Write the linear equation in slope-intercept form, y = mx + b (Show the Five Steps)
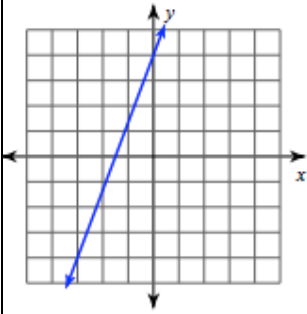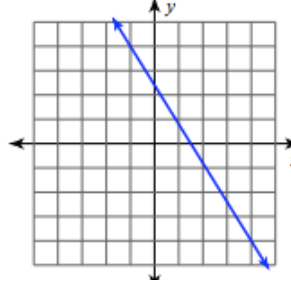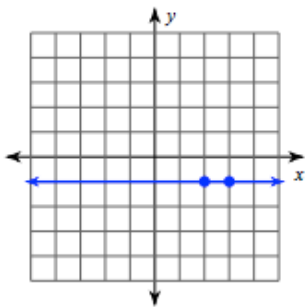
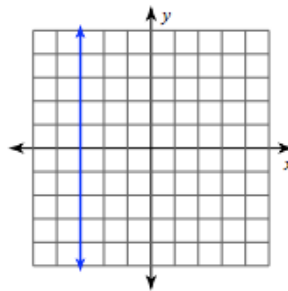| 9)	10)
11) (2,5) and (5,17)	12) (−2,9) and (0,9)

Vertical and Horizontal Lines

Identify the equation of each line

13)

14)

15) Horizontal Line that goes through the point (2, -5).

16) Mr. Klein is on a diet. He currently weighs 230 pounds. He loses 4 pounds per month. Write a linear equation that represents Mr. Klein's weight, w after m months.

17) Frankie is a plumber. He charges a flat rate in addition to an hourly rate when making house calls. The amount he charges C, that Frankie charges over h hours is represented below.

C= 35h + 150

Provide a written interpretation for the two parameters; 35 and 150.

_____

_____

18) Elizabeth is determined to save money over the course of the summer to help pay for college expenses through the school year. She has $2,500 saved and plans on saving $187.50 per week from her paycheck.

A. If S represents the savings and w represents the number of weeks during the summer, write a linear equation for S in terms of w.

B. How much money will Elizabeth have after 10 weeks?

C. If Elizabeth wants to save over $4000, how many weeks will she have to work and save?

19) Wendy is counting calories burned when exercising. She calculates that after 10 minutes of constant exercise she burned 50 calories. After 30 minutes of constant exercise she burned 150 calories.

A. Represent the information as two coordinate pairs in the form of (m,c) where m is the number of minutes and c is the number of calories burned.

B. Calculate the slope between the two coordinates.

C. Assuming the relationship between m and c is linear, create an equation for C in terms of m