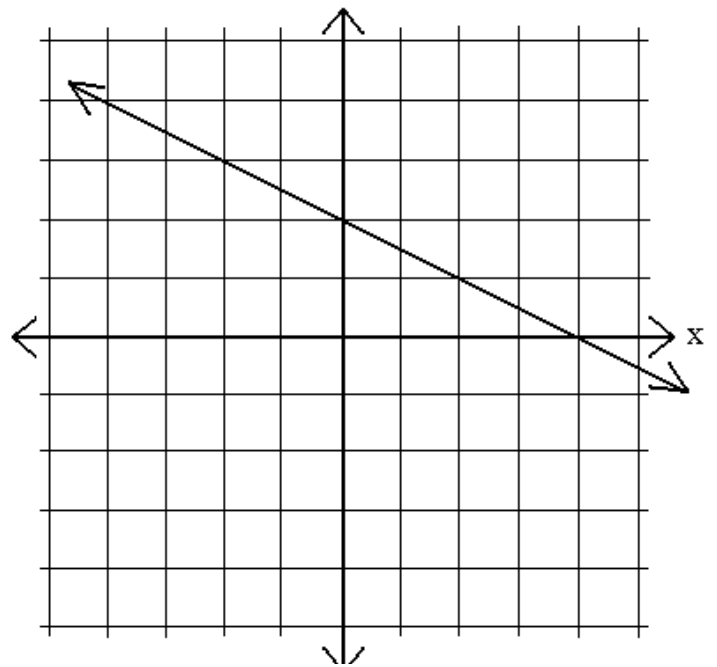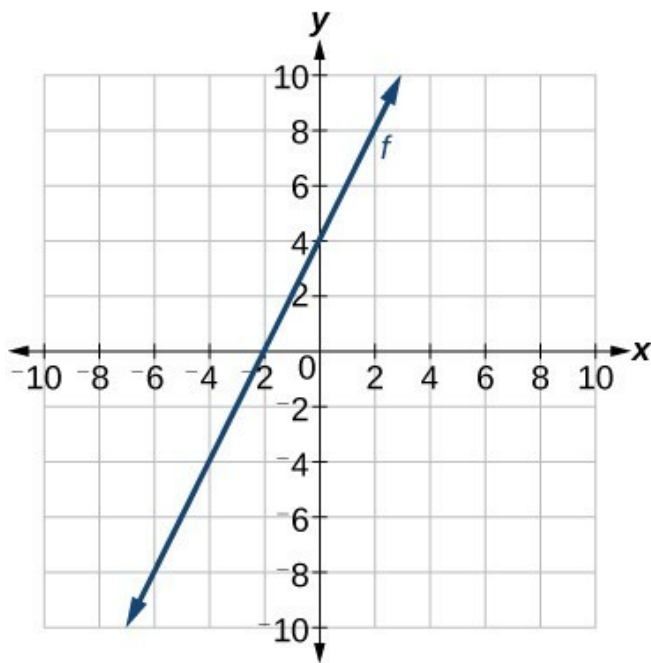# Unit 5 Study Guide

Chapter 4 – Graphs, Tables, Equations, & Patterns

1)   Decide whether each of the following points is on the line $y = 3x - 2$. For each point, show your work or explain how you decided.

a. (0, -2)   b. (-2, 0)   c. (–10, -28)   d. (20, 58)

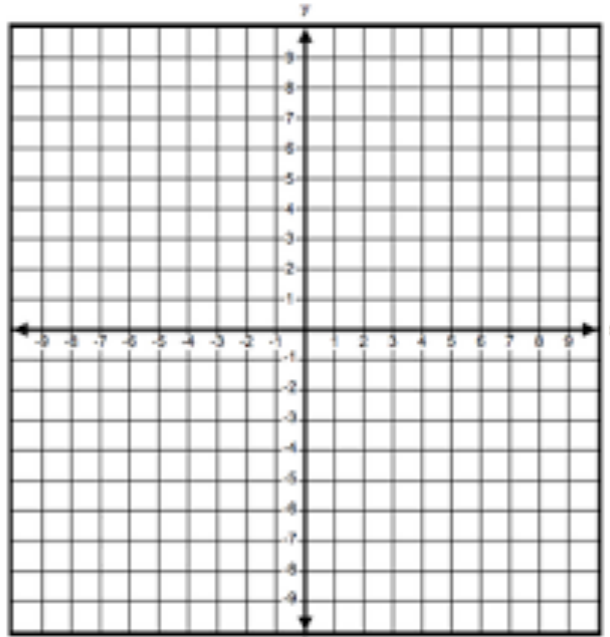2.)   Write an equation for each graph below.

3.) Graph and label each line on the same set of axes.

     a. $y = \frac{1}{2}x + 2$

     b.   y = -3x - 1
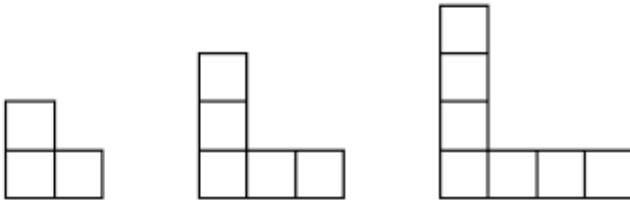

4.)   Study the figures in the pattern below.

Figure 1   Figure 2   Figure 3

a.   Write an equation to represent the relationship between the figure number (x) and the number of tiles in the figure (y).

b.   How many tiles will Figure 13 have? Show how you found your answer.

c.   Which figure will have 145 tiles? Show how you found your answer. <u>Chapter 3 &</u>

5 – Equations

Solve each of the following equations for x. Show your work.

5. $2x - 3(x - 4) = 5 - 3(2x + 2) - 6$

6. $\frac{x}{3} + \frac{x+2}{5} = 4$

7. $\frac{x+3}{3} = \frac{x+3}{2}$

8. $6 - x - 6 = 4x$

9. Solve for r: $x = 10 - 3(r - x)$

10. solve for y: $2x - 3(2x + y) = 2y + 3 - 2$

Review – Rational Numbers & Proportional Relationships

11.) $-3 - 2 \div 2 \cdot 4 - (-2) + 3$

12.) A copy machine produces 30 copies in 5 minutes. How many copies can the machine make in 20 minutes and how do you know?

13) It costs $60 for 5 students to go to the movies.   How much does it cost for 155 students to go?

14.   Which of the following equations are proportional?

a.   y = 2x   b.   y = 3x + 1   c   y = 4x - 2   d   y = 3x

15.   What is 2% of 150?