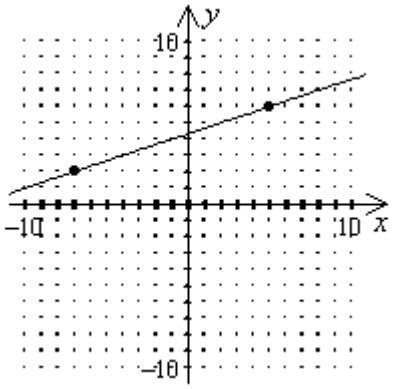
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Geometry Chapter 3 Review Packet (Busch)

1. Find the slope of the line passing through the points $A(7, -4)$ and $B(-6, -7)$.

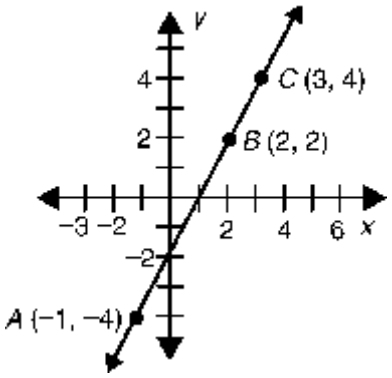
2. Find the slope of the line.



3. Find the slope of the line that passes through the points A (-1,5) and B (7,1).

4. Find the slope of the line that passes through points A (-5,-3) and B (7, -5).

5. Calculate the slope of the line. Does it matter which points are used? Why?



6. What is the slope of a line parallel to the line $3x - 2y = 8$?

7. Are the lines with the equations $y = -\frac{1}{3}x + 2$ and $y = -\frac{1}{3}x - 2$ *parallel*, *perpendicular*, or *skew*? Explain your answer.

8. Which line is parallel to $y = \frac{2}{3}x - 7$?

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

   b. $y = \frac{2}{3}x + 1$

   c. $y = \frac{3}{2}x + 2$

   d. $y = -\frac{2}{3}x - 7$

9. Write an equation for the line passing through the point $(-2, 4)$ that has a slope of 3.

10. Write the slope-intercept form of the equation of the line passing through the point (–2, –5) and parallel to the line $y = 3x - 4$.

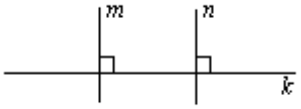
11. Which line is parallel to $y = \frac{1}{2}x + 3$ and passes through (0, 0)?
    a. $y = \frac{1}{2}x + 6$
    b. $y = \frac{1}{2}x - 3$
    c. $y = \frac{1}{2}x$
    d. $y = 2x$

12. Which best describes the relationship between the lines with equations $6x - 5y = -5$ and $18x - 15y = 0$?
    a. same line
    b. neither parallel nor perpendicular
    c. perpendicular
    d. parallel

13. What is the slope of a line perpendicular to the line $3x + y = 7$?
    a. 3
    b. –3
    c. $\frac{1}{3}$
    d. $-\frac{1}{3}$

14. Write the slope-intercept form of the equation of the line passing through the point (5, –4) and perpendicular to the line $y = -\frac{4}{3}x + 5$.

15. Tell whether lines *m* and *n* are parallel or not parallel and explain.



16. True or False: If two lines are perpendicular to the same transversal, then they are parallel.

Geometry Chapter 3 Review Packet (Busch)
Answer Section

1. $\frac{3}{13}$
2. slope = $\frac{1}{3}$
3. $-\frac{1}{2}$
4. $-\frac{1}{6}$
5. 2; no; the slope ratio is the same for any two points on a line.
6. $\frac{3}{2}$
7. parallel; Slopes are equal and y-intercepts are different
8. B
9. $y = 3x + 10$
10. $y = 3x + 1$
11. C
12. D
13. C
14. $y = \frac{3}{4}x - \frac{31}{4}$
15. parallel; Lines Perpendicular to a Transversal Theorem (Thm. 3.12)
16. True