Parallel and Perpendicular Lines #2

Name_____ Period_____ Date_____

1. Lines that are parallel share the same _____.

   a. y-intercept b. origin c. slope d. x-intercept

2. Decide whether the graphs of y = -3x + 2 and y + 3x = -4 are parallel lines.

3. Parallel lines never _____.

4. Write an equation of a line that is parallel to $y = \frac{2}{5}x + 8$ with a y-intercept of 0.

5. Write an equation of a line that is parallel to y = 4x + 2, passing through the point (0, 3).

6. Write an equation of a line that is parallel to 3x + 2y = 6, with a y-intercept of -1.

7. Write an equation of a line parallel to 5x + 2y = 20, passing through the point (2, 6).

8. What is the negative reciprocal of 2?

9. Perpendicular lines always intersect at _____.

a. the origin
b. a 90 degree angle
c. a 100 degree angle
d. none of the above

10. Are the lines y = 3x + 12 and y = -3x + 12 perpendicular? Explain.

11. Are the lines y = 4x + 3 and $y = \frac{1}{4}x + 2$ perpendicular? Explain.

12. Are the lines y = 2x and $y = -\frac{1}{2}x + 1$ perpendicular? Explain.

13. Write the equation of a line that is perpendicular to $y = -\frac{1}{3}x + 4$, passing through the point (0, 5).

14. Write the equation of a line that is perpendicular to 2x + 3y = 12, passing through the point (2, -3).

15. Write the equation of a line that is perpendicular to y = 5x, with a y-intercept of 4.