

Assignment

Name _____ Date _____

Parking Lot Design Parallel and Perpendicular Lines in the Coordinate Plane

State whether each pair of lines is parallel, perpendicular, or neither. Explain your answer using a complete sentence.

1. $y = 4x - 18$

$$y = 4x$$

2. $y = 2x - 6$

$$y = -\frac{1}{2}x + 9$$

3. $y = 6x$

$$y = \frac{1}{6}x - 5$$

4. $2y = 2x + 10$

$$y = -\frac{1}{2}x$$

5. $7x - 2 = y$

$$y = 7x$$

6. $y = x$

$$y = -x$$

7. $x = 5$
 $y = 2$

8. Write the equations of 3 lines that are parallel to $y = \frac{2}{3}x + 7$.

9. Write the equations of 3 lines that are perpendicular to $y = 4x + 2$.

10. Write the equation of a line that is perpendicular to $y = \frac{1}{3}x + 2$.

11. Write the equation of a line that is perpendicular to the line in your answer to Question 10.

12. Is the line from your answer in Question 11 parallel, perpendicular or neither to the original line in number 10? Explain.