## Parallel and Perpendicular Lines Practice Worksheet A

**Name**_____ **Class Period**_____

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**Determine if the following lines are parallel, perpendicular, or neither. Show work when necessary.**

1. $y = \frac{1}{2}x + 4$
   $y = \frac{1}{2}x - 5$

2. $y = 2x + 7$
   $y = -2x + 3$

3. $y = \frac{-1}{4}x$
   $y = 4x - 3$

4. $2x + 4y = 8$
   $3x + 6y = -6$

5. $3x + y = 5$
   $x - 3y = -3$

6. $8x + y = 7$
   $8x - y = 4$

7. $y = \frac{1}{4}x + 3$
   $2x + 8y = -8$

8. $x - 2y = -4$
   $y = \frac{1}{2}x + 6$

9. Which describes a line parallel to the line described by y = – 3x + 2?

   A. y = – 3x  B. y = 1/3 x  C. y = 2 – 3x  D. y = 1/3x + 2

10. The graph of a linear function f(x) is parallel to the line described by 2x + y =5 and contains point (6, – 2) . What is the y – intercept of f(x)?

**Write the equation of <u>a line parallel</u> and <u>a line perpendicular</u> to the given line and passes through the given point.**

**<u>Parallel Line:</u>** **<u>Perpendicular Line</u>**:

9. $y = \frac{1}{3}x + 1 \quad (-3, 4)$

10. $y = 4x + 2 \quad (-8, -3)$

11. $y = \frac{-2}{3}x + 1 \quad (-6, 1)$

12. $y = \frac{-5}{2}x - 3 \quad (10, -3)$

15. Jocelyn writes the equation of a line that passes through the point (4, 0) and is perpendicular to the line y = 2x + 1. Jocelyn writes her equation in the form y = mx + b. What are the values of m and b?

A. m = 2 b = 1 B. m = 2 b = 2 C. m = – ½ b = 2 D. m = – ½, b = 4

16. Nadine graphs a line using the coordinates ( – 2, 6) (–1, 4) (2, – 2) (4, – 6). Mei graphs a line that is parallel to Nadine's line. Which of these could be the equation of Mei's line?

A. – x + 2y = 8 B. 2x + y = 8 C. x + 2y = 8 D. – 2x + y = – 8