5-6. Parallel and Perpendicular

Name _____ Hr ____

Tell the slope of the line <u>parallel</u> to the given line.

Tell the slope of the line <u>perpendicular</u> to the given line.

1. $y = 2x - 3$

4. $y = 2x - 3$

2. $y = 1/3x + 7$

5. $y = 1/3x + 7$

3. $2x - 4y = 8$

6. $2x - 4y = 8$

Write the equation for the line that is <u>parallel</u> to the given line and goes through the ordered pair.

7. // to $y = 3x - 4$, goes through (4, 1)

8. // to $2x + y = 6$, goes through (-2, 2)

Step 1: find old m.
Step 2: find new m.
Step 3: solve for new b.
Step 4: write equation.

9. // to $y = 1/2x + 8$, goes through (4, -2)

Write the equation for the line that is <u>perpendicular</u> to the given line and goes through the ordered pair.

10. ⊥ to $y = 1/3x + 4$, goes through (0, 4)

11. ⊥ to $y = -4x - 8$, goes through (4, 2)

Step 1: find old m.
Step 2: find new m.
Step 3: solve for new b.
Step 4: write equation.

12. Are the lines parallel, perpendicular, or neither? Explain.

$y = 2x - 8$

$4x + 2y = 12$

13. Which equations are parallel and which are perpendicular?
   (hint: must be in SI form to compare their slopes)

A	B	C	D	E	F
$y = 3x - 4$	$y = 1/3x + 7$	$3x + y = 9$	$-3x + y = 6$	$-x + 3y = 6$	$y = -1/3x + 10$