NAME _____ DATE _____ PERIOD _____

Practice

Writing Equations of Parallel and Perpendicular Lines

Determine whether the graphs of each pair of equations are parallel, perpendicular, coinciding, or none of these.

1. $x + 3y = 18$
$3x + 9y = 12$

2. $2x - 4y = 8$
$x - 2y = 4$

3. $-3x + 2y = 6$
$2x + 3y = 12$

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

5. $4x + 8y = 2$
$2x + 4y = 8$

6. $3x - y = 9$
$6x - 2y = 18$

Write the standard form of the equation of the line that is parallel to the graph of the given equation and that passes through the point with the given coordinates.

7. $2x + y - 5 = 0; (0, 4)$ **8.** $3x - y + 3 = 0; (-1, -2)$ **9.** $3x - 2y + 8 = 0; (2, 5)$

Write the standard form of the equation of the line that is perpendicular to the graph of the given equation and that passes through the point with the given coordinates.

10. $2x - y + 6 = 0; (0, -3)$ **11.** $2x - 5y - 6 = 0; (-4, 2)$ **12.** $3x + 4y - 13 = 0; (2, 7)$

13. ***Consumerism*** Marillia paid \$180 for 3 video games and 4 books. Three months later she purchased 8 books and 6 video games. Her brother guessed that she spent \$320. Assuming that the prices of video games and books did not change, is it possible that she spent \$320 for the second set of purchases? Explain.