Name_____ Class_____ Date_____

Practice 5–5

Parallel and Perpendicular Lines

Find the slope of a line parallel to the graph of each equation.

1. $y = 4x + 2$ **2.** $y = \frac{2}{7}x + 1$ **3.** $y = -9x - 13$ **4.** $y = -\frac{1}{2}x + 1$

5. $6x + 2y = 4$ **6.** $y - 3 = 0$ **7.** $-5x + 5y = 4$ **8.** $9x - 5y = 4$

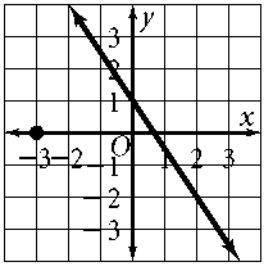
9. $-x + 3y = 6$ **10.** $6x - 7y = 10$ **11.** $x = -4$ **12.** $-3x - 5y = 6$

Write an equation for the line that is perpendicular to the given line and that passes through the given point.

13. $(6,4); y = 3x - 2$ **14.** $(-5,5); y = -5x + 9$ **15.** $(-1,-4); y = \frac{1}{6}x + 1$

16. $(1,1); y = -\frac{1}{4}x + 7$ **17.** $(12,-6); y = 4x + 1$ **18.** $(0,-3); y = -\frac{4}{3}x - 7$

19.



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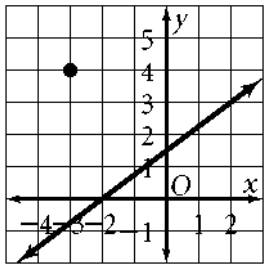

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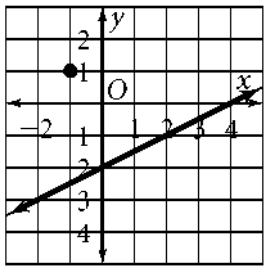
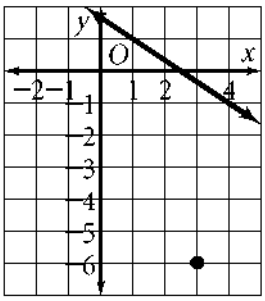


Write an equation for the line that is parallel to the given line and that passes through the given point.

22. $(3,4); y = 2x - 7$ **23.** $(1,3); y = -4x + 5$ **24.** $(4,-1); y = x - 3$

25. $(4,0); y = -\frac{3}{2}x + 9$ **26.** $(-8,-4); y = -\frac{3}{4}x + 5$ **27.** $(9,-7); -7x - 3y = 3$

28.



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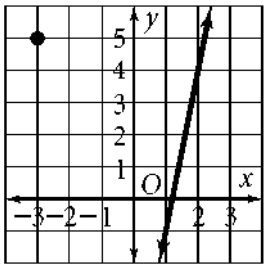

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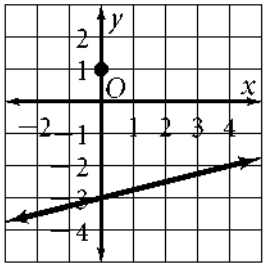

Tell whether the lines for each pair of equations are *parallel, perpendicular,* or *neither.*

31. $y = 3x - 8$

$3x - y = -1$

32. $3x + 2y = -5$

$y = \frac{2}{3}x + 6$

33. $y = -\frac{5}{2}x + 11$

$-5x + 2y = 20$

34. $9x + 3y = 6$

$3x + 9y = 6$

35. $y = -4$

$y = 4$

36. $x = 10$

$y = -2$