Name _____ Class _____ Date _____

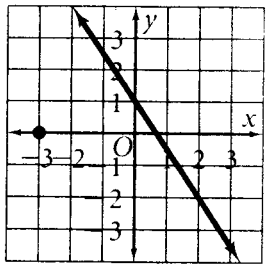
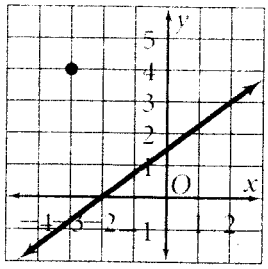
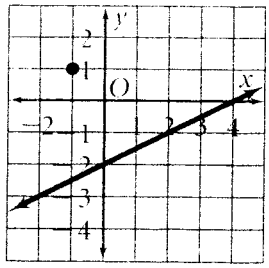
Practice 6-5

Parallel and Perpendicular Lines

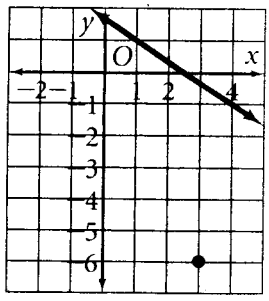
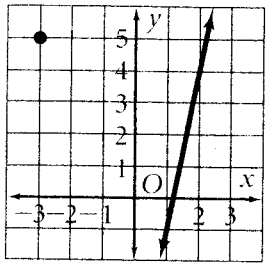
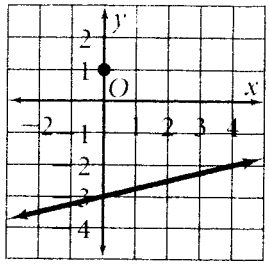
Find the slope of a line parallel to the graph of each equation.

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. 
20. 
21. 

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. 
29. 
30. 

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. $x = 10$
    $y = -2$