EXERCISES

Rewrite each equation in slope-intercept form $y = mx + b$.

1. $x + y = 5$
2. $x - y = 5$
3. $x + y = -5$
4. $-x + y = 5$
5. $2x + y = 6$
6. $2x - y = -6$
7. $-2x + 2y = 7$
8. $2y + 3x = -5$

Find the slope of a line that is perpendicular to the given line.

9. $6x - 3y = 8$
10. $4x - 5y = 20$
11. $x + 5y = 10$
12. $3x + y = 1$
13. $x + y = 5$
14. $x - y = 5$
15. $y - 2x = -5$
16. $2x + y = 9$
17. $y = 5$
18. $x = -3$
19. $2x - \frac{1}{3}y = 10$
20. $\frac{1}{2}x - \frac{3}{2}y = 6$

Tell whether or not each pair of equations are parallel, perpendicular, or neither.

21. $2x - 3y = 8$
    $-2x + 3y = 14$
22. $2x - 3y = 8$
    $2x + 3y = 14$
23. $2x - 3y = 8$
    $3x + 2y = 14$
24. $y - 4x = -3$
    $2y - 8x = 5$
25. $y - 4x = 8$
    $2y + 8x = 3$
26. $5y - 3x = 25$
    $3y + 5x = 15$
27. $x + y = 5$
    $x - y = 5$
28. $x + y = 5$
    $x + y = 7$
29. $x - y = 10$
    $x - y = 9$
30. $5y - 4x = 10$
    $5x + 4y = 1$
31. $4x + 8y = 7$
    $2x + 4y = 9$
32. $4x - 2y = 13$
    $2x - 4y = 11$
33. $4x - 2y = 13$
    $2x + 4y = 11$
34. $\frac{2}{3}x + y = 15$
    $y = \frac{3}{2}x - 10$
35. $2x - \frac{1}{2}y = 3$
    $y = -\frac{1}{2}x - 3$

36. What is the slope of a line that is parallel to the line $5x - 4y = 7$?
37. What is the slope of a line that is perpendicular to the line $y = 2$?
38. What is the slope of a line that is parallel to the line $x = 2$?
39. What is the slope of a line that is perpendicular to a vertical line ?
40. What is the slope of a line that is parallel to a horizontal line ?
41. Write an equation in slope-intercept form for a line perpendicular to the line with slope 7 and y-intercept 15.
42. Find the equation in standard form of a line that passes the point (10, –2) and is parallel to the line $2x + 5y = 3$.
43. Find the equation in standard form of a line that passes the point (10, –2) and is perpendicular to the line $2x + 5y = 3$.