

# Practice 6-5

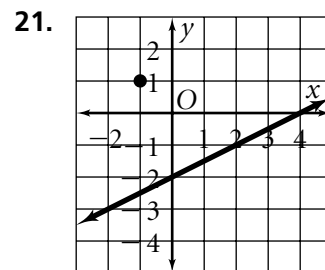
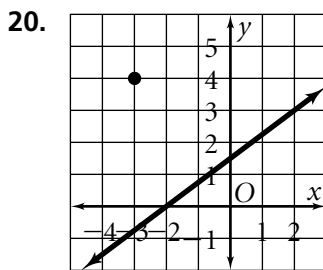
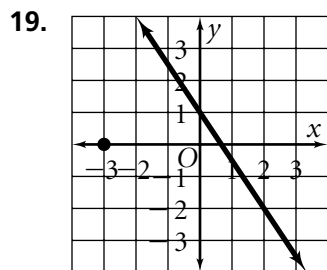
## Parallel and Perpendicular Lines

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. $-3x - 5y = 6$         |

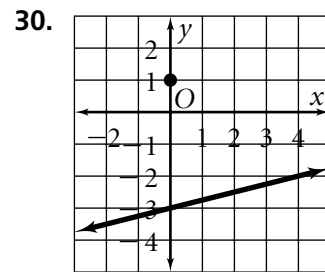
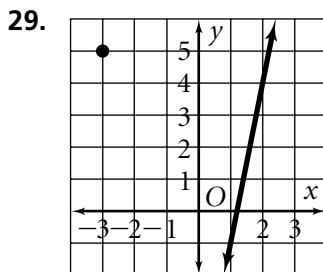
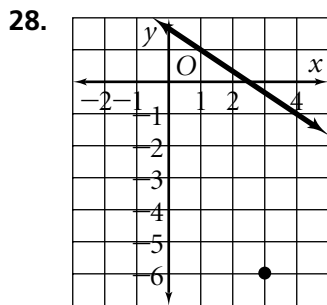
Write an equation for the line that is perpendicular to the given line and that passes through the given point.

- |                                     |                            |                                      |
|-------------------------------------|----------------------------|--------------------------------------|
| 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. $(0, -3); y = -\frac{4}{3}x - 7$ |



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. $(9, -7); -7x - 3y = 3$ |



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

- |                                    |  |   |
|------------------------------------|--|---|
| 31. $y = 3x - 8$<br>$3x - y = -1$  | 32. $3x + 2y = -5$<br>$y = \frac{2}{3}x + 6$ | 33. $y = -\frac{5}{2}x + 11$<br>$-5x + 2y = 20$ |
| 34. $9x + 3y = 6$<br>$3x + 9y = 6$ | 35. $y = -4$<br>$y = 4$                      | 36. $x = 10$<br>$y = -2$                        |