

Practice 6-6

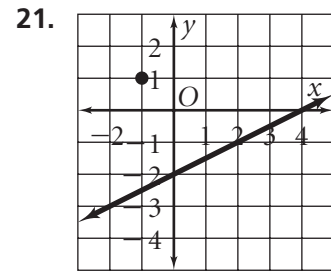
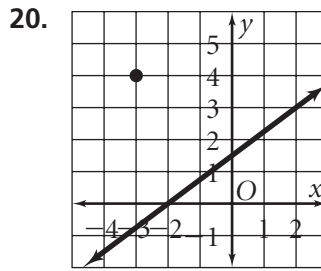
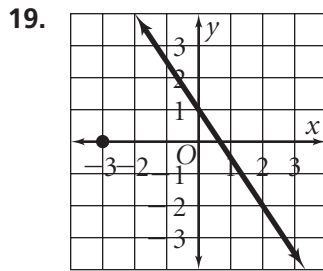
Parallel and Perpendicular Lines

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

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

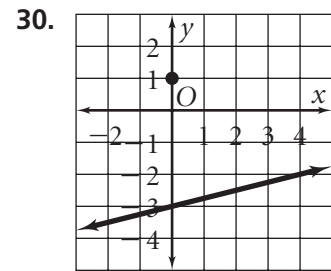
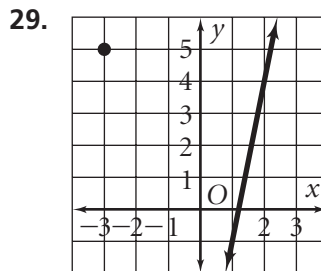
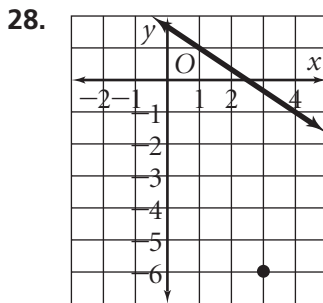
Write an equation for the line that is perpendicular to the given line and that passes through the given point.

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|-------------------------------------|----------------------------|--------------------------------------|
| 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.

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|------------------------------------|---------------------------------------|-----------------------------|
| 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*.

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

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