

Practice 6-6

Parallel and Perpendicular Lines

Find the slope of a line parallel to each of the following.

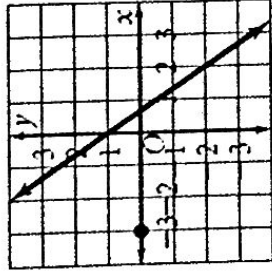
- $y = 4x + 2$
- $y = \frac{2}{7}x + 1$
- $y = -9x - 13$
- $y = -\frac{1}{2}x + 1$
- $6x + 2y = 4$
- $y - 3 = 0$
- $-5x + 5y = 4$
- $9x - 5y = 4$
- $-x + 3y = 6$
- $6x - 7y = 10$
- $x = -4$
- $-3x - 5y = 6$

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

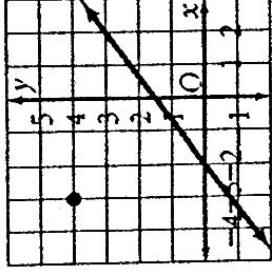
- $(6, 4)$; $y = 3x - 2$
- $(-5, 5)$; $y = -5x + 9$
- $(-1, -4)$; $y = \frac{1}{6}x + 1$

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

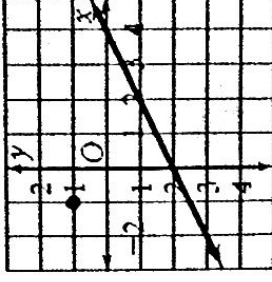
16.



17.



18.

19. $(3, 4)$; $y = 2x - 7$ 20. $(1, 3)$; $y = -4x + 5$ 21. $(4, -1)$; $y = x - 3$

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

22. $y = 3x - 8$ 24. $y = -\frac{5}{2}x + 11$ $3x - y = -1$ $y = \frac{2}{3}x + 6$ $-5x + 2y = 20$ 25. $9x + 3y = 6$
 $3x + 9y = 6$ 26. $y = -4$
 $y = 4$ 27. $x = 10$
 $y = -2$