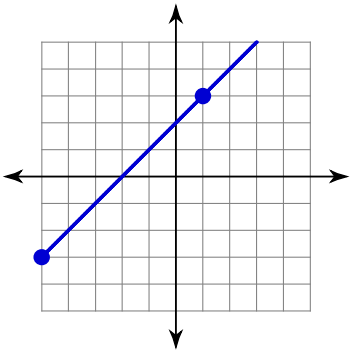
Algebra 1 Name_____

Review of Linear Functions (Lines)

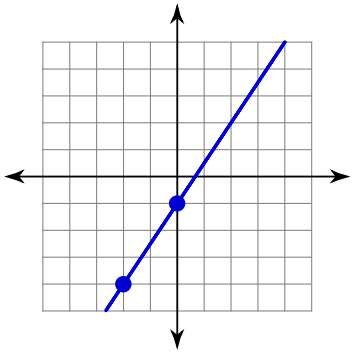
Date_____ Period____

Find the slope of each line.

1)



2)



Find the slope of the line through each pair of points.

3) $(10, 2), (-9, 7)$

4) $(-16, 11), (-19, -12)$

Find the slope of each line.

5) $y = 3x + 2$

6) $y = -x + 5$

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

7) $y = -2x - 2$

8) $y = \frac{1}{4}x + 4$

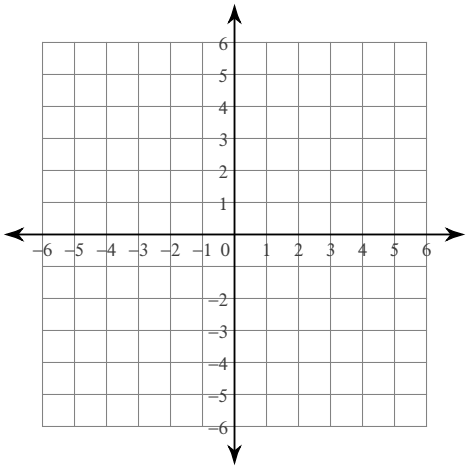
Find the slope of a line perpendicular to each given line.

9) $y = -\frac{1}{2}x - 2$

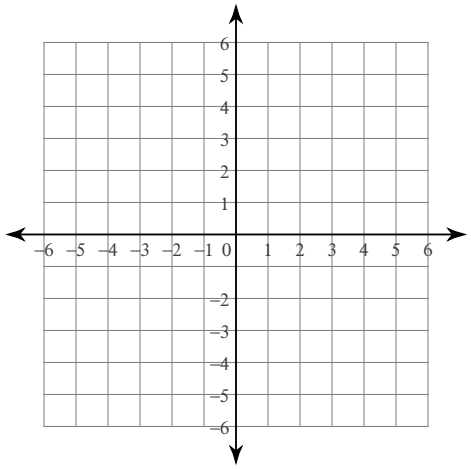
10) $y = \frac{5}{2}x$

Sketch the graph of each line.

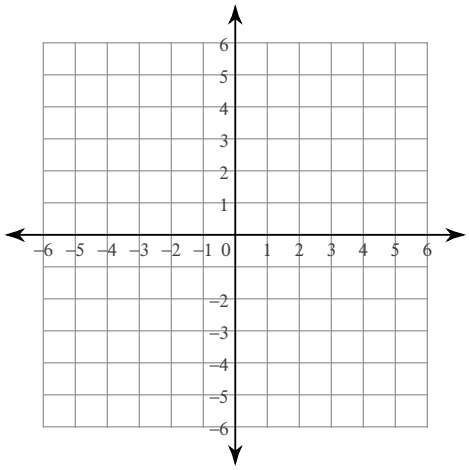
11) $y = 3$



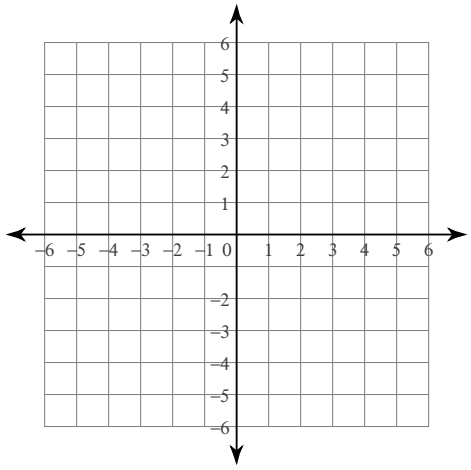
12) $y = -4x + 4$



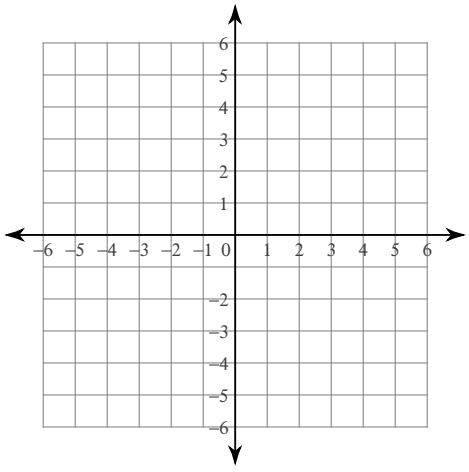
13) $y = x + 5$



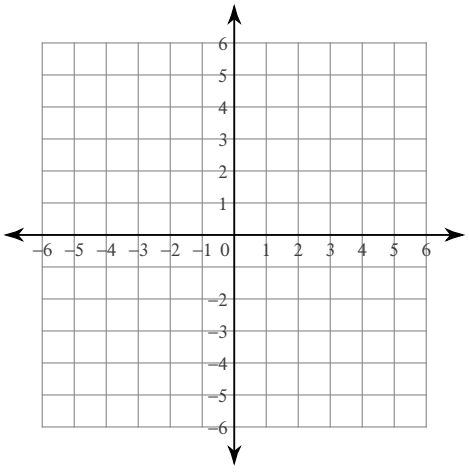
14) $y = \frac{1}{4}x + 4$



15) x-intercept = 1, y-intercept = −4

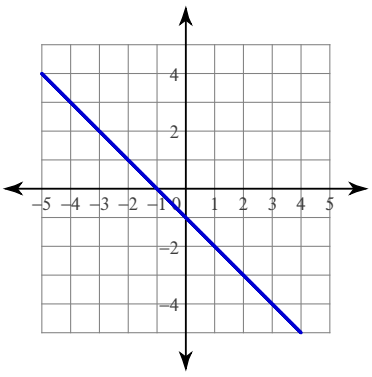


16) x-intercept = 4, y-intercept = −3



Write the slope-intercept form of the equation of each line.

17)



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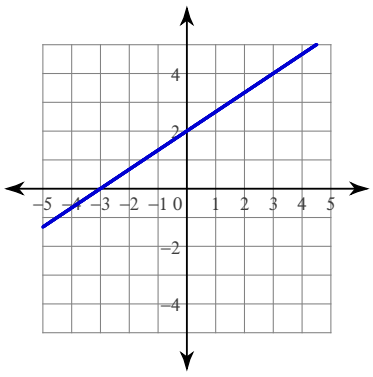

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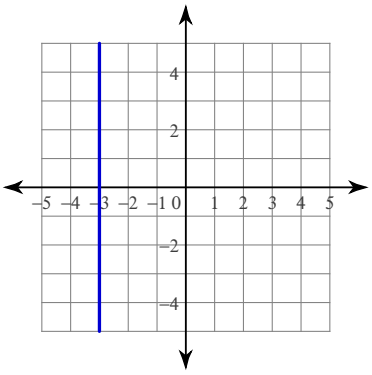

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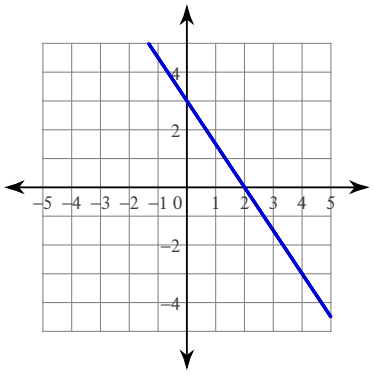


Write the slope-intercept form of the equation of each line given the slope and y-intercept.

21) Slope = $-\frac{3}{4}$, y-intercept = 5

22) Slope = −1, y-intercept = 1

23) Slope = $-\frac{4}{5}$, y-intercept = −1

24) Slope = −1, y-intercept = −3

Write the slope-intercept form of the equation of each line.

25) $x - y = 6$

26) $x = -3$

27) $x = 5$

28) $8x - 7y = 17$

29) $x - 2y = -12$

30) $2x - 5y = 5$

Write the standard form of the equation of each line given the slope and y-intercept.

31) Slope = -3, y-intercept = -3

32) Slope = $\frac{3}{2}$, y-intercept = 4

33) Slope = $\frac{3}{2}$, y-intercept = -2

34) Slope = $-\frac{3}{5}$, y-intercept = -1

35) Slope = $-\frac{1}{5}$, y-intercept = 4

36) Slope = $\frac{1}{2}$, y-intercept = 3

Write the slope-intercept form of the equation of the line through the given point with the given slope.

37) through: $(-1, -2)$, slope = -1

38) through: $(4, -5)$, slope = undefined

39) through: $(-5, 4)$, slope = $-\frac{4}{5}$

40) through: $(4, 5)$, slope = 1

41) through: $(-3, 0)$, slope = $\frac{4}{3}$

42) through: $(-5, -3)$, slope = $\frac{1}{6}$

Write the slope-intercept form of the equation of the line through the given points.

43) through: $(2, 1)$ and $(0, -5)$

44) through: $(4, -2)$ and $(4, -5)$

45) through: $(1, -1)$ and $(4, -5)$

46) through: $(0, 2)$ and $(-2, -5)$

47) through: $(5, -4)$ and $(3, -4)$

48) through: $(2, 1)$ and $(-4, 0)$

Write the slope-intercept form of the equation of the line described.

49) through: $(2, -3)$, parallel to $y = \frac{1}{4}x - 2$

50) through: $(5, 4)$, parallel to $y = \frac{1}{5}x - 5$

51) through: $(-5, 3)$, parallel to $y = -\frac{2}{5}x - 4$

52) through: $(1, -5)$, parallel to $y = -5x$

53) through: $(-3, -4)$, parallel to $y = \frac{2}{3}x + 2$

54) through: $(0, -5)$, parallel to $y = -\frac{3}{5}x - 1$

55) through: $(-5, -3)$, perp. to $y = -\frac{5}{7}x$

56) through: $(1, 2)$, perp. to $y = -\frac{1}{6}x - 5$

57) through: $(3, -4)$, perp. to $y = \frac{1}{3}x + 5$

58) through: $(3, 4)$, perp. to $y = -\frac{1}{2}x + 5$

59) through: $(5, 4)$, perp. to $y = -\frac{5}{8}x - 5$

60) through: $(4, -1)$, perp. to $y = -x + 2$

Answers to Review of Linear Functions (Lines) (ID: 1)

1) 1

2) $\frac{3}{2}$

3) $-\frac{5}{19}$

4) $\frac{23}{3}$

5) 3

6) −1

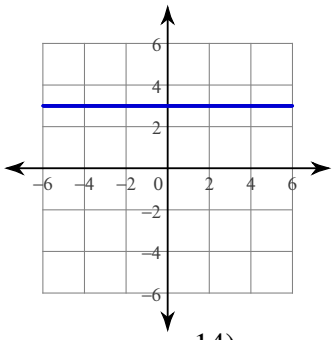
7) −2

8) $\frac{1}{4}$

9) 2

10) $-\frac{2}{5}$

11)



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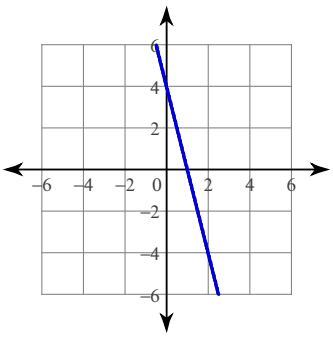

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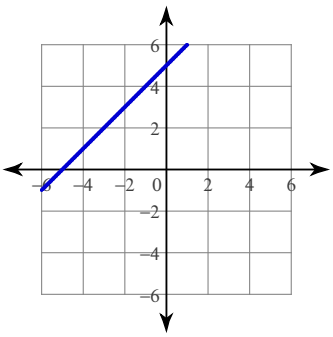

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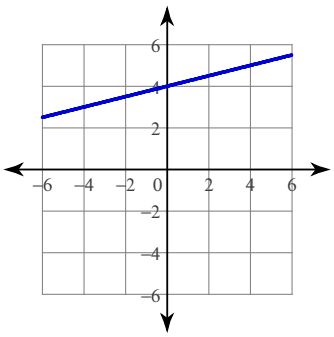

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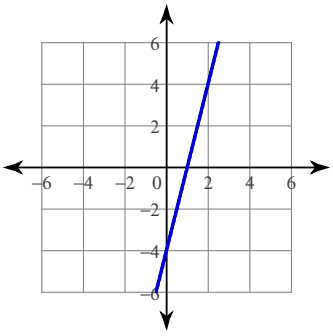

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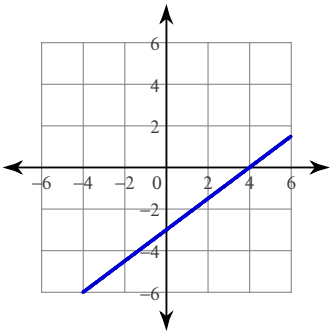

17) $y = -x - 1$

18) $y = \frac{2}{3}x + 2$

19) $x = -3$

20) $y = -\frac{3}{2}x + 3$

21) $y = -\frac{3}{4}x + 5$

22) $y = -x + 1$

23) $y = -\frac{4}{5}x - 1$

24) $y = -x - 3$

25) $y = x - 6$

26) $x = -3$

27) $x = 5$

28) $y = \frac{8}{7}x - \frac{17}{7}$

29) $y = \frac{1}{2}x + 6$

30) $y = \frac{2}{5}x - 1$

31) $3x + y = -3$

32) $3x - 2y = -8$

33) $3x - 2y = 4$

34) $3x + 5y = -5$

35) $x + 5y = 20$

36) $x - 2y = -6$

37) $y = -x - 3$

38) $x = 4$

39) $y = -\frac{4}{5}x$

40) $y = x + 1$

41) $y = \frac{4}{3}x + 4$

42) $y = \frac{1}{6}x - \frac{13}{6}$

43) $y = 3x - 5$

44) $x = 4$

45) $y = -\frac{4}{3}x + \frac{1}{3}$

46) $y = \frac{7}{2}x + 2$

47) $y = -4$

48) $y = \frac{1}{6}x + \frac{2}{3}$

49) $y = \frac{1}{4}x - \frac{7}{2}$

50) $y = \frac{1}{5}x + 3$

51) $y = -\frac{2}{5}x + 1$

52) $y = -5x$

53) $y = \frac{2}{3}x - 2$

54) $y = -\frac{3}{5}x - 5$

55) $y = \frac{7}{5}x + 4$

56) $y = 6x - 4$

57) $y = -3x + 5$

58) $y = 2x - 2$

59) $y = \frac{8}{5}x - 4$

60) $y = x - 5$