

Writing Equations of Lines Extra Practice Problems & Answers

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

1) Slope = 4, y-intercept = 1

2) Slope = $\frac{1}{4}$, y-intercept = 3

3) Slope = $\frac{1}{2}$, y-intercept = -4

4) Slope = 2, y-intercept = -5

5) Slope = $\frac{7}{4}$, y-intercept = -2

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

7) Slope = $\frac{1}{2}$, y-intercept = 5

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

9) Slope = -1, y-intercept = -4

10) Slope = $\frac{1}{4}$, y-intercept = 0

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

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

13) Slope = 3 , y-intercept = 1

14) Slope = $-\frac{7}{5}$, y-intercept = -4

15) Slope = $-\frac{3}{2}$, y-intercept = 0

16) Slope = 1 , y-intercept = -2

17) Slope = -1 , y-intercept = 0

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

19) Slope = $\frac{9}{4}$, y-intercept = 4

20) Slope = -3 , y-intercept = 2

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

21) through: $(1, -3)$, slope = -8

22) through: $(-1, -3)$, slope = 1

23) through: $(3, -4)$, slope $= -1$

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

25) through: $(0, 1)$, slope $= -1$

26) through: $(2, -2)$, slope $= 2$

27) through: $(4, 5)$, slope $= -3$

28) through: $(-2, -5)$, slope $= 3$

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

30) through: $(1, -3)$, slope $= -4$

31) through: $(2, 4)$, slope $= 3$

32) through: $(-3, -4)$, slope $= 6$

33) through: $(-1, 0)$, slope $= -2$

34) through: $(-2, 0)$, slope $= -2$

35) through: $(-4, -1)$, slope $= 3$

36) through: $(-1, -5)$, slope $= 10$

37) through: $(1, 0)$, slope = 1

38) through: $(-2, -1)$, slope = 3

39) through: $(3, 5)$, slope = 4

40) through: $(-5, 5)$, slope = -2

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

41) through: $(1, 2)$ and $(0, 5)$

42) through: $(1, 1)$ and $(3, -5)$

43) through: $(1, -4)$ and $(0, 5)$

44) through: $(0, 5)$ and $(-2, 3)$

45) through: $(0, -3)$ and $(-3, 0)$

46) through: $(5, 3)$ and $(-2, -4)$

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

48) through: $(3, 1)$ and $(0, -5)$

49) through: $(-5, 0)$ and $(-2, -3)$

50) through: $(4, 0)$ and $(5, 5)$

51) through: $(2, -4)$ and $(-1, -1)$

52) through: $(1, 3)$ and $(0, 1)$

53) through: $(-1, -5)$ and $(1, -1)$

54) through: $(-4, -2)$ and $(-3, 0)$

55) through: $(4, -3)$ and $(2, 1)$

56) through: $(0, 2)$ and $(-3, 5)$

57) through: $(2, 0)$ and $(1, 3)$

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

59) through: $(0, 3)$ and $(-1, -4)$

60) through: $(-1, -4)$ and $(0, 4)$

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

61) through: $(-1, -3)$, parallel to $y = 5x + 3$

62) through: $(4, 3)$, parallel to $y = x + 2$

63) through: $(1, -4)$, parallel to $y = -x + 4$

64) through: $(-4, -3)$, parallel to $y = x + 4$

65) through: $(-3, -1)$, parallel to $y = 5x + 3$

66) through: $(-2, -5)$, parallel to $y = 4x - 1$

67) through: $(-1, 1)$, parallel to $y = -3x - 1$

68) through: $(-1, -3)$, parallel to $y = -2x - 3$

69) through: $(-1, 5)$, parallel to $y = -3x + 5$

70) through: $(1, -3)$, parallel to $y = x + 4$

71) through: $(1, 2)$, parallel to $y = 5x + 1$

72) through: $(1, 4)$, parallel to $y = 3x + 5$

73) through: $(3, -5)$, parallel to $10x + y = -3$

74) through: $(-3, -2)$, parallel to $x + y = 5$

75) through: $(1, -5)$, parallel to $8x + 2y = 6$

76) through: $(-3, -1)$, parallel to $4x - 2y = -8$

77) through: $(-2, 5)$, parallel to $-3x + y = -4$

78) through: $(-1, -5)$, parallel to $9x - y = -3$

79) through: $(-1, 2)$, parallel to $y = -3x + 3$

80) through: $(-1, 0)$, parallel to $y = -4x + 3$

81) through: $(-4, -5)$, perp. to $y = -x - 4$

82) through: $(1, -5)$, perp. to $y = \frac{1}{10}x - 5$

83) through: $(-1, -4)$, perp. to $y = x - 4$

84) through: $(-1, 5)$, perp. to $y = x - 2$

85) through: $(1, 0)$, perp. to $y = \frac{1}{3}x$

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

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

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

89) through: $(1, -4)$, perp. to $y = \frac{1}{8}x + 5$

90) through: $(-1, 4)$, perp. to $y = \frac{1}{9}x + 5$

91) through: $(5, 3)$, perp. to $y = -\frac{1}{7}x - 2$

92) through: $(-4, -1)$, perp. to $y = -x - 1$

93) through: $(1, 0)$, perp. to $y = -\frac{1}{3}x - 5$

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

95) through: $(1, 0)$, perp. to $-x - 5y = -15$

96) through: $(1, -1)$, perp. to $-3x + y = 4$

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

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

99) through: $(2, 0)$, perp. to $y = -x - 3$

100) through: $(-2, 4)$, perp. to $2x - 6y = -18$

Answers to

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|---------------------------|-----------------------------|----------------------------|----------------------------|
| 1) $y = 4x + 1$ | 2) $y = \frac{1}{4}x + 3$ | 3) $y = \frac{1}{2}x - 4$ | 4) $y = 2x - 5$ |
| 5) $y = \frac{7}{4}x - 2$ | 6) $y = \frac{1}{4}x - 4$ | 7) $y = \frac{1}{2}x + 5$ | 8) $y = \frac{3}{4}x + 2$ |
| 9) $y = -x - 4$ | 10) $y = \frac{1}{4}x$ | 11) $y = \frac{1}{5}x - 1$ | 12) $y = \frac{1}{3}x + 3$ |
| 13) $y = 3x + 1$ | 14) $y = -\frac{7}{5}x - 4$ | 15) $y = -\frac{3}{2}x$ | 16) $y = x - 2$ |
| 17) $y = -x$ | 18) $y = -\frac{3}{2}x + 1$ | 19) $y = \frac{9}{4}x + 4$ | 20) $y = -3x + 2$ |
| 21) $y = -8x + 5$ | 22) $y = x - 2$ | 23) $y = -x - 1$ | 24) $y = 2x + 5$ |
| 25) $y = -x + 1$ | 26) $y = 2x - 6$ | 27) $y = -3x + 17$ | 28) $y = 3x + 1$ |
| 29) $y = -x + 3$ | 30) $y = -4x + 1$ | 31) $y = 3x - 2$ | 32) $y = 6x + 14$ |
| 33) $y = -2x - 2$ | 34) $y = -2x - 4$ | 35) $y = 3x + 11$ | 36) $y = 10x + 5$ |
| 37) $y = x - 1$ | 38) $y = 3x + 5$ | 39) $y = 4x - 7$ | 40) $y = -2x - 5$ |
| 41) $y = -3x + 5$ | 42) $y = -3x + 4$ | 43) $y = -9x + 5$ | 44) $y = x + 5$ |
| 45) $y = -x - 3$ | 46) $y = x - 2$ | 47) $y = 2x - 2$ | 48) $y = 2x - 5$ |
| 49) $y = -x - 5$ | 50) $y = 5x - 20$ | 51) $y = -x - 2$ | 52) $y = 2x + 1$ |
| 53) $y = 2x - 3$ | 54) $y = 2x + 6$ | 55) $y = -2x + 5$ | 56) $y = -x + 2$ |
| 57) $y = -3x + 6$ | 58) $y = -4x + 16$ | 59) $y = 7x + 3$ | 60) $y = 8x + 4$ |
| 61) $y = 5x + 2$ | 62) $y = x - 1$ | 63) $y = -x - 3$ | 64) $y = x + 1$ |
| 65) $y = 5x + 14$ | 66) $y = 4x + 3$ | 67) $y = -3x - 2$ | 68) $y = -2x - 5$ |
| 69) $y = -3x + 2$ | 70) $y = x - 4$ | 71) $y = 5x - 3$ | 72) $y = 3x + 1$ |
| 73) $y = -10x + 25$ | 74) $y = -x - 5$ | 75) $y = -4x - 1$ | 76) $y = 2x + 5$ |
| 77) $y = 3x + 11$ | 78) $y = 9x + 4$ | 79) $y = -3x - 1$ | 80) $y = -4x - 4$ |
| 81) $y = x - 1$ | 82) $y = -10x + 5$ | 83) $y = -x - 5$ | 84) $y = -x + 4$ |
| 85) $y = -3x + 3$ | 86) $y = -2x + 3$ | 87) $y = 3x - 2$ | 88) $y = -2x - 4$ |
| 89) $y = -8x + 4$ | 90) $y = -9x - 5$ | 91) $y = 7x - 32$ | 92) $y = x + 3$ |
| 93) $y = 3x - 3$ | 94) $y = 2x - 2$ | 95) $y = 5x - 5$ | 96) $y = -3x + 2$ |
| 97) $y = 2x + 1$ | 98) $y = -2x + 1$ | 99) $y = x - 2$ | 100) $y = -3x - 2$ |