

## Practice - Point Slope

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

- |  |   |
|--|---|
| 1) through $(2, 3)$ , slope = undefined        | 2) through $(1, 2)$ , slope = undefined         |
| 3) through $(2, 2)$ , slope = $\frac{1}{2}$    | 4) through $(2, 1)$ , slope = $-\frac{1}{2}$    |
| 5) through $(-1, -5)$ , slope = 9              | 6) through $(2, -2)$ , slope = $-2$             |
| 7) through $(-4, 1)$ , slope = $\frac{3}{4}$   | 8) through $(4, -3)$ , slope = $-2$             |
| 9) through $(0, -2)$ , slope = $-3$            | 10) through $(-1, 1)$ , slope = 4               |
| 11) through $(0, -5)$ , slope = $-\frac{1}{4}$ | 12) through $(0, 2)$ , slope = $-\frac{5}{4}$   |
| 13) through $(-5, -3)$ , slope = $\frac{1}{5}$ | 14) through $(-1, -4)$ , slope = $-\frac{2}{3}$ |
| 15) through $(-1, 4)$ , slope =                | 16) through $(1, -4)$ , slope = $-\frac{3}{2}$  |

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

- |  |  |
|--|--|
| 17) through: $(-1, -5)$ , slope = 2              | 18) through: $(2, -2)$ , slope = $-2$            |
| 19) through: $(5, -1)$ , slope = $-\frac{3}{5}$  | 20) through: $(-2, -2)$ , slope = $-\frac{2}{3}$ |
| 21) through: $(-4, 1)$ , slope = $\frac{1}{2}$   | 22) through: $(4, -3)$ , slope = $-\frac{7}{4}$  |
| 23) through: $(4, -2)$ , slope = $-\frac{3}{2}$  | 24) through: $(-2, 0)$ , slope = $-\frac{5}{2}$  |
| 25) through: $(-5, -3)$ , slope = $-\frac{2}{5}$ | 26) through: $(3, 3)$ , slope = $\frac{7}{3}$    |
| 27) through: $(2, -2)$ , slope = 1               | 28) through: $(-4, -3)$ , slope = 0              |
| 29) through: $(-3, 4)$ , slope = undefined       | 30) through: $(-2, -5)$ , slope = 2              |
| 31) through: $(-4, 2)$ , slope = $-\frac{1}{2}$  | 32) through: $(5, 3)$ , slope = $\frac{6}{5}$    |

**Write the point-slope form of the equation of the line through the**

**given points.**

33) through:  $(-4, 3)$  and  $(-3, 1)$

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

37) through:  $(-4, -2)$  and  $(0, 4)$

39) through:  $(3, 5)$  and  $(-5, 3)$

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

34) through:  $(1, 3)$  and  $(-3, 3)$

36) through:  $(-4, 5)$  and  $(4, 4)$

38) through:  $(-4, 1)$  and  $(4, 4)$

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

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

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

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

45) through:  $(-5, 5)$  and  $(2, -3)$

47) through:  $(4, 1)$  and  $(1, 4)$

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

51) through:  $(0, 3)$  and  $(-1, -1)$

44) through:  $(-5, -1)$  and  $(5, -2)$

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

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

50) through:  $(0, 2)$  and  $(2, 4)$

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



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## Answers - Point Slope

1)  $0 = x - 2$

2)  $0 = x - 1$

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

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

5)  $y + 5 = 9(x + 1)$

6)  $y + 2 = -2(x - 2)$

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

8)  $y + 3 = -2(x - 4)$

9)  $y + 2 = -3x$

10)  $y - 1 = 4(x + 1)$

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

12)  $y - 2 = -\frac{5}{4}x$

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

14)  $y + 4 = -\frac{2}{3}(x + 1)$

15)  $y - 4 = -\frac{5}{4}(x + 1)$

16)  $y + 4 = -\frac{3}{2}x(x - 1)$

17)  $y = 2x - 3$

18)  $y = -2x + 2$

19)  $y = -\frac{3}{5}x + 2$

20)  $y = -\frac{2}{3}x - \frac{10}{3}$

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

22)  $y = -\frac{7}{4}x + 4$

23)  $y = -\frac{3}{2}x + 4$

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

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

26)  $y = \frac{7}{3}x - 4$

27)  $y = x - 4$

28)  $y = -3$

29)  $x = -3$

30)  $y = 2x - 1$

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

32)  $y = \frac{6}{5}x - 3$

33)  $y - 3 = -2(x + 4)$

34)  $y - 3 = 0$

35)  $y - 1 = \frac{1}{8}(x - 5)$

36)  $y - 5 = -2(x + 4)$

37)  $y + 2 = \frac{3}{2}(x + 4)$

38)  $y - 1 = \frac{3}{8}(x + 4)$

39)  $y - 5 = \frac{1}{4}(x - 3)$

40)  $y + 4 = -(x + 1)$

41)  $y + 3 = -\frac{8}{7}(x - 3)$

42)  $y + 5 = -\frac{1}{4}(x + 1)$

43)  $y = -\frac{3}{4}x - \frac{11}{4}$

44)  $y = -\frac{1}{10}x - \frac{3}{2}$

45)  $y = -\frac{8}{7}x - \frac{5}{7}$

46)  $y = \frac{1}{2}x - \frac{3}{2}$

47)  $y = -x + 5$

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

49)  $y = -x + 2$

50)  $y = x + 2$

51)  $y = 4x + 3$

52)  $y = \frac{3}{7}x + \frac{6}{7}$



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