

Equation of a Line | Point-slope Form

Write the equation of the line whose slope and the point through which it passes are given.

1) $m = 6$ and $(4, 12)$

2) $m = \frac{1}{4}$ and $(-3, -9)$

3) $m = -7$ and $(-9, 5)$

4) $m = 1$ and $(6, -10)$

5) $m = -2$ and $(-1, -4)$

6) $m = -\frac{3}{5}$ and $(2, -3)$

7) $m = -\frac{5}{8}$ and $(-8, -7)$

8) $m = 8$ and $(-5, 4)$

9) Find the equation of the line whose slope is $\frac{1}{6}$ passing through the point $(-9, 3)$.

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Answer key

Write the equation of the line whose slope and the point through which it passes are given.

1) $m = 6$ and $(4, 12)$

$$\underline{y = 6x - 12}$$

2) $m = \frac{1}{4}$ and $(-3, -9)$

$$\underline{y = \frac{1}{4}x - \frac{33}{4}}$$

3) $m = -7$ and $(-9, 5)$

$$\underline{y = -7x - 58}$$

4) $m = 1$ and $(6, -10)$

$$\underline{y = x - 16}$$

5) $m = -2$ and $(-1, -4)$

$$\underline{y = -2x - 6}$$

6) $m = -\frac{3}{5}$ and $(2, -3)$

$$\underline{y = -\frac{3}{5}x - \frac{9}{5}}$$

7) $m = -\frac{5}{8}$ and $(-8, -7)$

$$\underline{y = -\frac{5}{8}x - 12}$$

8) $m = 8$ and $(-5, 4)$

$$\underline{y = 8x + 44}$$

9) Find the equation of the line whose slope is $\frac{1}{6}$ passing through the point $(-9, 3)$.

$$\underline{y = \frac{1}{6}x + \frac{9}{2}}$$