

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) $m = -8$ and $(3, -6)$

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

3) $m = -2$ and $(-7, 8)$

4) $m = -\frac{3}{2}$ and $(6, 1)$

5) $m = 7$ and $(6, -3)$

6) $m = -10$ and $(0, 9)$

7) $m = \frac{1}{6}$ and $(-5, 7)$

8) $m = -4$ and $(-2, -9)$

9) Find the equation of the line that passes through the point $(10, 0)$ and whose slope is $\frac{2}{7}$.

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Answer key

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

1) $m = -8$ and $(3, -6)$

$$\underline{y = -8x + 18}$$

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

$$\underline{y = \frac{4}{9}x + \frac{2}{9}}$$

3) $m = -2$ and $(-7, 8)$

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

4) $m = -\frac{3}{2}$ and $(6, 1)$

$$\underline{y = -\frac{3}{2}x + 10}$$

5) $m = 7$ and $(6, -3)$

$$\underline{y = 7x - 45}$$

6) $m = -10$ and $(0, 9)$

$$\underline{y = -10x + 9}$$

7) $m = \frac{1}{6}$ and $(-5, 7)$

$$\underline{y = \frac{1}{6}x + \frac{47}{6}}$$

8) $m = -4$ and $(-2, -9)$

$$\underline{y = -4x - 17}$$

9) Find the equation of the line that passes through the point $(10, 0)$ and whose slope is $\frac{2}{7}$.

$$\underline{y = \frac{2}{7}x - \frac{20}{7}}$$