

Point-Slope Form

The diagram shows the point-slope form equation $y - y_1 = m(x - x_1)$. A green box labeled "slope of the line" has an arrow pointing to the variable m . A blue box labeled " (x_1, y_1) Point on line" has two arrows: one pointing to y_1 and another pointing to x_1 .

$$y - y_1 = m(x - x_1)$$

Given a point and the slope, write the following lines in point-slope form.

$$y - y_1 = m(x - x_1)$$

Slope: -3
Point: (2,-3)

Slope: -1
Point: (-3,5)

Slope: 4
Point: (0,-6)

Given the following lines in point-slope form, determine the given point and the slope.

$$y - y_1 = m(x - x_1)$$

$$y - 3 = -3(x + 6)$$

$$y + 5 = 2(x - 1)$$

$$y - 7 = -(x + 4)$$

Write a line in point-slope form, containing the following two points.

$$y - y_1 = m(x - x_1)$$

(3,6) and (-2,-4)

Write a line in point-slope form, containing the following two points.

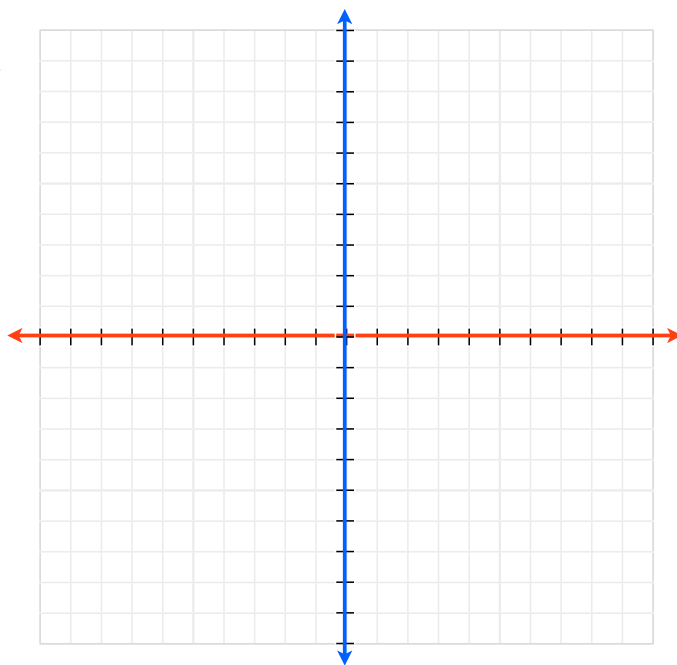
$$y - y_1 = m(x - x_1)$$

$(-4, 2)$ and $(4, 6)$

Graph the following lines in point-slope form.

$$y - y_1 = m(x - x_1)$$

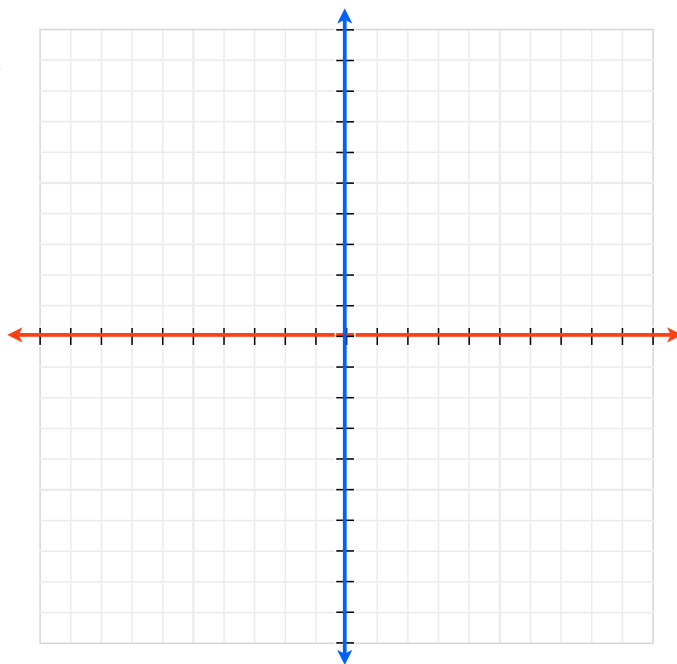
$$y + 4 = 2(x + 3)$$



Graph the following lines in point-slope form.

$$y - y_1 = m(x - x_1)$$

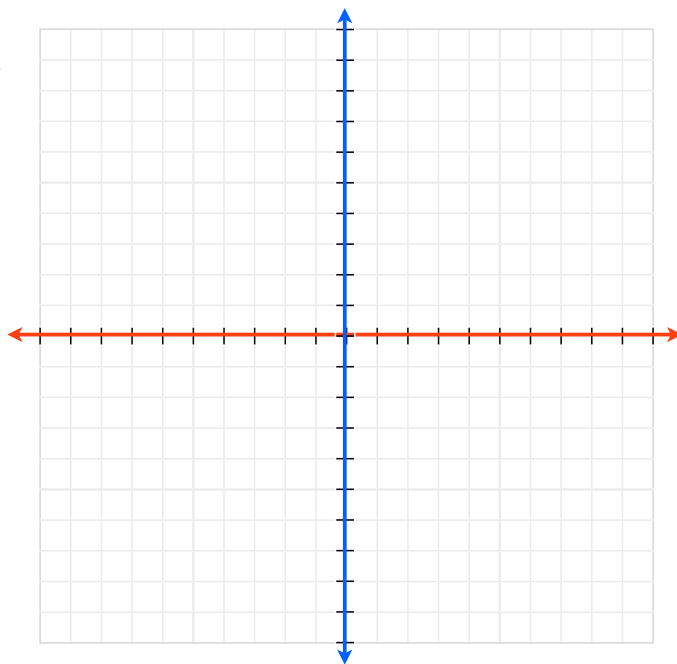
$$y + 4 = -\frac{1}{5}(x - 1)$$



Graph the following lines in point-slope form.

$$y - y_1 = m(x - x_1)$$

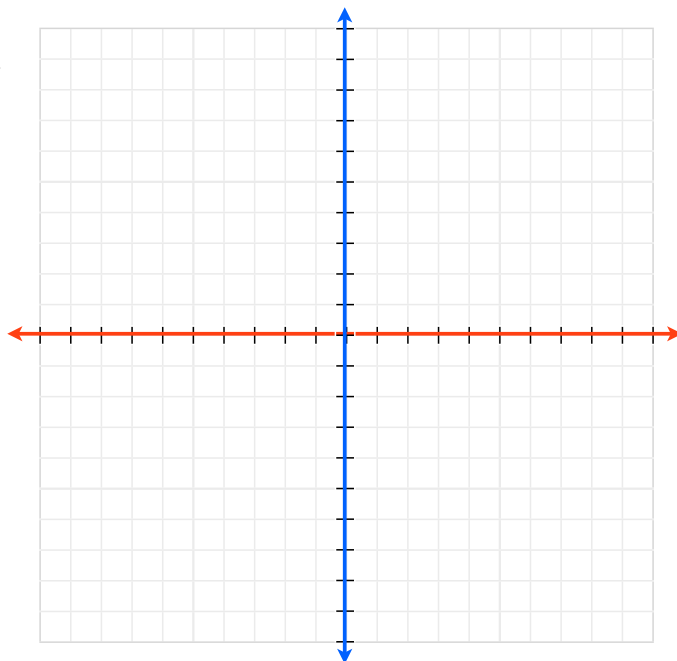
$$y - 5 = \frac{2}{5}(x - 5)$$



Graph the following lines in **point-slope** form.

$$y - y_1 = m(x - x_1)$$

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



Point-Slope Form

slope of the line

$$y - y_1 = m(x - x_1)$$

(x_1, y_1) Point on line

Given a line in **point-slope** form, solve for y to put in **slope-intercept** form