

Topic: Building Writing Equations – Given 2 Points

Write the equation give two points.

1. (-3, 4) and (5, 8)

$$m = \frac{4}{8} = \frac{1}{2}$$
$$y = \frac{1}{2}x + \frac{11}{2}$$
$$4 = \frac{1}{2}(-3) + b$$

$$4 = -\frac{3}{2} + b$$
$$b = \frac{11}{2}$$

2. (4, 5) and (8, 3)

$$y = -\frac{1}{2}x + 7$$

$$m = \frac{-2}{4} = -\frac{1}{2}$$

$$5 = -\frac{1}{2}(4) + b$$

$$5 = -2 + b$$

$$b = 7$$

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

$$y = \frac{1}{2}x + 5$$

$$m = \frac{-2}{-4} = \frac{1}{2}$$

$$6 = \frac{1}{2}(2) + b$$

$$6 = 1 + b$$

$$b = 5$$

4. (-1, 2) and (7, 6)

$$y = \frac{1}{2}x + \frac{5}{2}$$

$$m = \frac{4}{8} = \frac{1}{2}$$

$$2 = \frac{1}{2}(-1) + b$$

$$2 = -\frac{1}{2} + b$$

$$b = \frac{5}{2}$$