

Name: _____ Period: _____ Date: _____

Point-Slope Form Bell Work

Write an equation in slope-intercept form of the line passing through the given points.

1) $(1, 4)$ and $(2, 7)$

2) $(4, -5)$ and $(-2, -2)$

3) $(1, 1)$ and $(2, 2)$

4) $(3, 3)$ and $(6, 5)$

Point-Slope Form Bell Work**Answer Key**

Write an equation in slope-intercept form of the line passing through the given points.

1) $(1, 4)$ and $(2, 7)$

$$\text{Slope } m = \frac{7-4}{2-1} = \frac{3}{1} = 3$$

$$\text{Put } (1, 4) \text{ in } y - y_1 = m(x - x_1):$$

$$y - 4 = 3(x - 1)$$

$$y = 3x + 1$$

2) $(4, -5)$ and $(-2, -2)$

$$\text{Slope } m = \frac{-2-(-5)}{-2-4} = \frac{3}{-2-4} = -\frac{1}{2}$$

$$\text{Put } (4, -5) \text{ in } y - y_1 = m(x - x_1):$$

$$y - (-5) = -\frac{1}{2}(x - 4)$$

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

3) $(1, 1)$ and $(2, 2)$

$$\text{Slope } m = \frac{2-1}{2-1} = \frac{1}{1} = 1$$

$$\text{Put } (1, 1) \text{ in } y - y_1 = m(x - x_1):$$

$$y - 1 = 1(x - 1)$$

$$y = x$$

4) $(3, 3)$ and $(6, 5)$

$$\text{Slope } m = \frac{5-3}{6-3} = \frac{2}{3}$$

$$\text{Put } (3, 3) \text{ in } y - y_1 = m(x - x_1):$$

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

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