

Parallel and Perpendicular Lines Bell Work

Write an equation in slope-intercept form of the line that passes through the given point and is parallel to the graph of the given equation.

1) $(1, 3); y = -4x + 3$

2) $(-2, -5); y = \frac{1}{2}x + 3$

Write an equation in slope-intercept form of the line that passes through the given point and is perpendicular to the graph of the given equation

3) $(2, 1); y = -2x + 1$

4) $(0, 1); y = \frac{3}{5}x + 3$

Parallel and Perpendicular Lines Bell Work**Answer Key**

Write an equation in slope-intercept form of the line that passes through the given point and is parallel to the graph of the given equation.

1) $(1, 3); y = -4x + 3$

Slope of the parallel line $m = -4$

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

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

$$y = -4x + 7$$

2) $(-2, -5); y = \frac{1}{2}x + 3$

Slope of the parallel line $m = \frac{1}{2}$

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

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

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

Write an equation in slope-intercept form of the line that passes through the given point and is perpendicular to the graph of the given equation

3) $(2, 1); y = -2x + 1$

Slope of the parallel line $m = \frac{1}{2}$

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

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

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

4) $(0, 1); y = \frac{3}{5}x + 3$

Slope of the parallel line $m = -\frac{5}{3}$

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

$$y - 1 = -\frac{5}{3}(x - 0)$$

$$y = -\frac{5}{3}x + 1$$