

## Parallel and Perpendicular Lines Assignment

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.  $(3, 2)$ ;  $y = 2x + 3$

2.  $(-1, 6)$ ;  $y = 9x - 5$

3.  $(0, 0)$ ;  $y = -\frac{1}{2}x + 5$

4.  $(5, 5)$ ;  $y = \frac{3}{5}x - 15$

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.

1.  $(2, 1)$ ;  $y = 2x + 1$

2.  $(-2, -14)$ ;  $y = -\frac{1}{7}x - 5$

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3.  $(0, 1); y = -x - 1$

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

Determine whether the graphs of the given equations are parallel or perpendicular or neither. Give reason for your answer.

1.  $y = 3x + 2$

$$y - 3x = -4$$

2.  $y - x = 10$

$$y = -x - 4$$

3.  $y = \frac{4}{5}x - 11$

$$y = -\frac{4}{5}x + 11$$