

Name: .....

Date: ..... Score: .....

## Equations of Parallel and Perpendicular Lines Worksheet

Determine if the given pair of lines is parallel, perpendicular or none

1  $3y = 3x + 15$   
 $2x - 2y = 2$

2  $y = -4x + 1$   
 $4y = x + 3$

3  $y = \frac{5}{6}x - 6$   
 $x + 5y = 4$

4  $-6x + y = 1$   
 $-6x + 3y = -9$

Write the slope-intercept form of the equation of the line described

5 through  $(-4, -5)$   
parallel to  $y = -2x - 5$

6 through  $(1, 3)$   
parallel to  $y = x + 5$

7 through  $(5, -5)$   
parallel to  $y = -\frac{3}{2}x - 5$

8 through  $(-2, 2)$   
parallel to  $y = \frac{2}{3}x - 2$

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### Answers

1  $3y = 3x + 15$   
 $2x - 2y = 2$

Parallel

3  $y = \frac{5}{6}x - 6$   
 $x + 5y = 4$

None

5 through  $(-4, -5)$   
parallel to  $y = -2x - 5$

$$y = -2x - 13$$

7 through  $(5, -5)$   
parallel to  $y = -\frac{3}{2}x - 5$

$$y = -\frac{3}{2}x + \frac{5}{2}$$

2  $y = -4x + 1$   
 $4y = x + 3$

Perpendicular

4  $-6x + y = 1$   
 $-6x + 3y = -9$

None

6 through  $(1, 3)$   
parallel to  $y = x + 5$

$$y = x + 2$$

8 through  $(-2, 2)$   
parallel to  $y = \frac{2}{3}x - 2$

$$y = \frac{2}{3}x + \frac{10}{3}$$