

Circle the two equations for lines that are parallel.

1.  $y = -\frac{1}{3}x$   
 $y = 3x + 2$   
 $y = -\frac{1}{3}x - 6$   
 $y = 3$

2.  $y = -\frac{1}{2}x + 3$   
 $y = \frac{1}{2}x + 1$   
 $y = 2x$   
 $x + 2y = 4$   
 $y = \frac{4-x}{2}$   
 $y = 2 - \frac{1}{2}x$

Circle the two equations for lines that are perpendicular.

3.  $y = 6x$   
 $y = \frac{1}{6}x$   
 $y = -\frac{1}{6}x + 5$   
 $y = 6$

4.  $x = -2$   
 $y = 1$   
 $y = -4x$   
 $y + 2 = -\frac{1}{4}(x - 12)$   
**NONE**

Rewrite each equation in slope-intercept form. Then identify the slope of the line described by each equation.

5.  $8x + 2y = 96$   
 $-8x \quad -8y$   
 $\frac{2y}{2} = \frac{96 - 8x}{2}$   
 $y = -4x + 48$   
 **$m = -4$**

6.  $y + 1 = 3x$   
 $-1 \quad -1$   
 $y = 3x - 1$   
 **$m = 3$**

7.  $5y = 165 - 9x$   
 $\frac{5y}{5} = \frac{165 - 9x}{5}$   
 $y = 33 - \frac{9}{5}x$   
 $y = -\frac{9}{5}x + 33$   
 **$m = -\frac{9}{5}$**

Find the slope of the line that contains each pair of points.

8.  $(3, 6)$  and  $(6, 9)$   
 $\frac{9-6}{6-3} = \frac{3}{3}$   
 **$m = 1$**

9.  $(2, 7)$  and  $(4, 4)$   
 $\frac{4-7}{4-2} = \frac{-3}{2}$   
 **$m = -\frac{3}{2}$**

10.  $(-1, -5)$  and  $(-9, -1)$   
 $\frac{-1 - (-5)}{-9 - (-1)} = \frac{4}{-8}$   
 **$m = -\frac{1}{2}$**

11.  $(2, 5)$  and  $(3, 1)$   
 $\frac{1-5}{3-2} = \frac{-4}{1}$   
 **$m = -4$**

12.  $(-9, -5)$  and  $(6, -5)$   
 $\frac{-5 - (-5)}{6 - (-9)} = \frac{0}{15}$   
 **$m = 0$**

13.  $(3, 4)$  and  $(3, -1)$   
 $\frac{-1-4}{3-3} = \frac{-5}{0}$   
 **$m$  is undefined**