

## Exercises to Determine an Equation for Each Line

For tutorial:

<http://math.about.com/od/algebra/ss/equationline.htm>

Answers:

1.  $y = 3x - 2$

2.  $y = -\frac{2}{3}x + 7$

3.  $x = 5$

4.  $x = -1$

5.  $y - 3 = 5(x - 2)$   
 $y - 3 = 5x - 10$   
 $y = 5x - 7$

6.  $y - (-6) = -2(x - 1)$   
 $y + 6 = -2x + 2$   
 $y = -2x - 4$

7.  $y - 5 = \frac{1}{2}(x - (-3))$   
 $y - 5 = \frac{1}{2}(x + 3)$   
 $2y - 10 = x + 3$   
 $0 = x - 2y + 13$  or  $x - 2y + 13 = 0$

$$\begin{aligned} 8. \text{ slope is } m &= \frac{7-4}{2-1} \\ &= 3 \end{aligned}$$

an equation is

$$\begin{aligned} y-4 &= 3(x-1) \\ y-4 &= 3x-3 \\ y &= 3x+1 \end{aligned}$$

9.

$$m = \frac{-1-5}{2-(-1)} \text{ or } = \frac{-6}{3} \text{ or } = -2$$

$$y-5 = -2(x-(-1))$$

$$y-5 = -2(x+1)$$

$$y-5 = -2x-2$$

$$y = -2x+3$$

10.

$$m = \frac{-7-(-4)}{5-(-3)} \text{ or } \frac{-7+4}{5+3} \text{ or } \frac{-3}{8}$$

$$y-(-4) = -\frac{3}{8}(x-(-3))$$

$$y+4 = -\frac{3}{8}(x+3)$$

$$8y+32 = -3x-9$$

$$3x+8y+41=0$$