

Worksheet 1.3A

Find the slope. $\left(\frac{y_2 - y_1}{x_2 - x_1}\right)$

1. (4, 7)(2, -3)

$$\frac{7 - (-3)}{4 - 2} = \frac{10}{2} = 5$$

2. (5, -1)(4, 6)

$$\frac{-1 - 6}{5 - 4} = \frac{-7}{1} = -7$$

3. (-3, 6)(-5, -4)

$$\frac{6 - (-4)}{-3 - (-5)} = \frac{10}{2} = 5$$

4. (2, -3)(-5, 4)

$$\frac{-3 - 4}{2 - (-5)} = \frac{-7}{7} = -1$$

State the slope and y-intercept of the graph of each equation. $y = mx + b$

5. $y = 2x - 5$

$$m = 2$$

$$b = -5$$

6. $\frac{2y}{2} = \frac{4x}{2} + \frac{6}{2}$

$$y = 2x + 3$$

$$m = 2 \quad b = 3$$

7. $3x + 2y = 10$

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

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

$$m = -\frac{3}{2} \quad b = 5$$

8. $\frac{-3y}{-3} = \frac{6x}{-3} + \frac{9}{-3}$

$$y = -2x - 3$$

$$m = -2, \quad b = -3$$

Write an equation in slope-intercept form that satisfies each condition. $y - y_1 = m(x - x_1)$

9. $m = 2, (2, -3)$

$$y + 3 = 2(x - 2)$$

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

$$y = 2x - 7$$

10. $m = -3, (-1, 5)$

$$y - 5 = -3(x + 1)$$

$$y - 5 = -3x - 3$$

$$y = -3x + 2$$

11. (2, 3)(4, 7)

$$\frac{3 - 7}{2 - 4} = \frac{-4}{-2} = 2$$

$$y - 3 = 2(x - 2)$$

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

$$y = 2x - 1$$

12. (-6, 2)(-8, 10)

$$\frac{2 - 10}{-6 - (-8)} = \frac{-8}{2} = -4$$

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

$$y - 2 = -4x - 24$$

$$y = -4x - 22$$

13. $m = 2, y\text{-int} = 6$ (0, 6)

$$y - 6 = 2(x - 0)$$

$$y - 6 = 2x$$

$$y = 2x + 6$$

14. $m = 0, (3, 5)$

$$y - 5 = 0(x - 3)$$

$$y - 5 = 0$$

$$y = 5$$