

Algebra Week 6 Homework

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Find the slope and y-intercept of the line.

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

- a. $3; \frac{4}{3}$
- b. $-3; \frac{4}{3}$
- c. $\frac{3}{4}; 3$
- d. $\frac{4}{3}; -3$

2. $y = \frac{7}{3}x - 1$

- a. $\frac{3}{7}; 1$
- b. $1; \frac{7}{3}$
- c. $-1; \frac{7}{3}$
- d. $\frac{7}{3}; -1$

Write an equation of a line with the given slope and y-intercept.

3. $m = 1, b = 4$

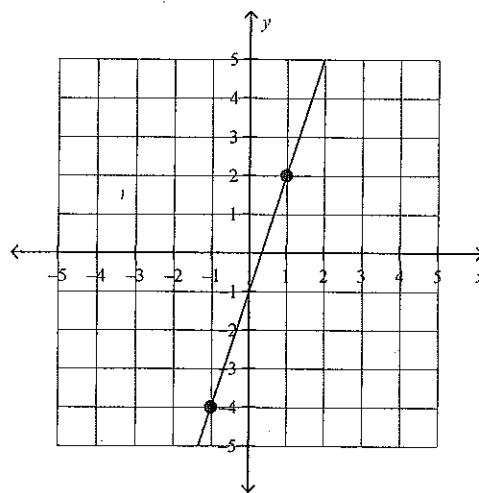
- a. $y = 4x + 1$
- b. $y = x - 4$
- c. $y = -1x + 4$
- d. $y = x + 4$

4. $m = \frac{1}{4}, b = -\frac{3}{4}$

- a. $y = 4x - \frac{3}{4}$
- b. $y = \frac{1}{4}x - \frac{3}{4}$
- c. $y = -\frac{3}{4}x + \frac{1}{4}$
- d. $y = \frac{1}{4}x + \frac{3}{4}$

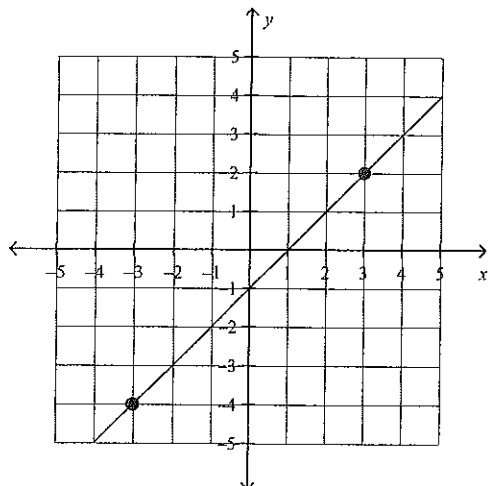
Write the slope-intercept form of the equation for the line.

5.



- a. $y = 3x - 1$
- b. $y = -3x - 1$
- c. $y = \frac{1}{3}x + 1$
- d. $y = \frac{1}{3}x - 1$

6.



- a. $y = 2x + 1$
- b. $y = -x - 1$
- c. $y = 2x - 1$
- d. $y = x - 1$

Write an equation in point-slope form for the line through the given point with the given slope.

7. $(4, -6); m = \frac{3}{5}$

- a. $y + 6 = \frac{3}{5}x - 4$
- b. $y - 6 = \frac{3}{5}(x + 4)$
- c. $y + 6 = \frac{3}{5}(x - 4)$
- d. $y - 4 = \frac{3}{5}(x + 6)$

8. $(10, -9); m = -2$

- a. $y - 10 = -2(x + 9)$
- b. $y - 9 = -2(x + 10)$
- c. $y - 9 = -2(x - 10)$
- d. $y + 9 = -2(x - 10)$

9. $(10, -8); m = -\frac{3}{4}$

- a. $y - 8 = -\frac{3}{4}(x - 10)$
- b. $y - 8 = -\frac{3}{4}(x + 10)$
- c. $y - 10 = -\frac{3}{4}(x + 8)$
- d. $y + 8 = -\frac{3}{4}(x - 10)$

10. A line passes through $(1, -5)$ and $(-3, 7)$.

- a. Write an equation for the line in point-slope form.
- b. Rewrite the equation in slope-intercept form.
- a. $y - 5 = 3(x + 1); y = 3x + 8$
- b. $y - 1 = \frac{1}{3}(x + 5); y = \frac{1}{3}x + \frac{8}{3};$
- c. $y - 5 = \frac{1}{3}(x + 1); y = \frac{1}{3}x + \frac{16}{3}$
- d. $y + 5 = -3(x - 1); y = -3x - 2$

11. Rewrite the equation $y - 3 = 4(x - 2)$ in y-intercept form.

- a. $y = 4x + 1$
- b. $y = 4x - 11$
- c. $y = 4x - 5$
- d. $y = 4x + 5$

12. Rewrite the equation $y = 4(x + 5) + 6$ in y-intercept form.

- a. $y = 4x - 11$
- b. $y = 4x + 11$
- c. $y = 4x - 26$
- d. $y = 4x + 26$