

3.10 y-Intercept of a Line

• Example 1

(a) Find the y -intercept for the line representing the equation

$$y = 3x + 4$$

The graph has y -intercept 4. Indeed, the point $(0, 4)$ is on the line

(b) Find the y -intercept for the line representing the equation

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

The y -intercept is -5 . Indeed, the point $(0, -5)$ is on the line.

● ● ● CHECK YOURSELF 1

Find the slope and y -intercept of the line representing each of the following equations.

a. $y = -3x - 7$

b. $y = \frac{3}{4}x + 5$

● ● ● CHECK YOURSELF ANSWER

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

3.10 Exercises

Name _____

Section _____

Date _____

A N S W E R S

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Find the slope and y -intercept of the line representing each of the following equations.

1. $y = 3x + 5$

2. $y = -7x + 3$

3. $y = -2x - 5$

4. $y = 5x - 2$

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

6. $y = -4x$

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

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

9. $4x + 3y = 12$

10. $2x + 5y = 10$

11. $y = 9$

12. $2x - 3y = 6$

13. $3x - 2y = 8$

14. $x = 5$

15. $y = 2x + 5$

16. $y = -4x - 3$

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

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

19. $2x + 3y = 6$

20. $5x - 2y = 10$

21. $y = -3$

22. $x = 2$