## ACTIVITY 12 PRACTICE

Write your answers on notebook paper. Show your work.

Lesson 12-1

1. Write the equation of a line in slope-intercept form that has a slope of -8 and a y-intercept of $(0, 3)$.

2. Write the equation of a line in slope-intercept form that passes through the point $(0, -7)$ and has a slope of $\frac{3}{4}$.

3. Find the slope and the y-intercept of the line whose equation is $-5x + 3y - 8 = 0$.

4. Which of the following is the slope-intercept form of the equation of the line in the graph?
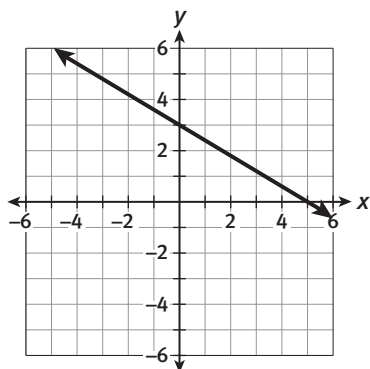
A. $y = -\frac{5}{3}x + 3$

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

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

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

After paying an initial fee each week, Mike can sell packs of baseball cards in a sports shop. He displays his possible earnings for one week on the following graph. Use the graph for Items 5–9.


Baseball Card Sales
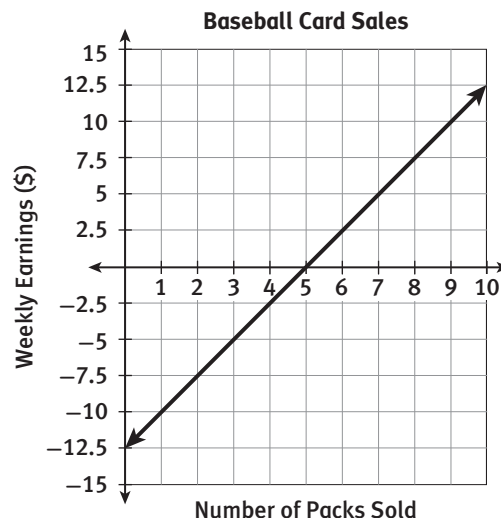
5. What is the initial fee Mike pays each week?

6. How many packs does Mike have to sell to break even?

7. What is the price of one pack of cards?

8. What is the equation in slope-intercept form for the line shown in graph?

9. How many packs of cards must Mike sell to make $40? Explain.

Lesson 12-2

10. What is the equation in point-slope form of the line that passes through $(-9, 12)$ with a slope of $\frac{5}{6}$?

11. What is the equation in slope-intercept form of the line that has a slope of 0.25 and passes through the point $(6, -8)$?

12. What is the equation in point-slope form of the line that passes through the points $(2, -3)$ and $(-5, 8)$?

13. Write an equation in slope-intercept form of the line that passes through the points (4, 2) and (1, −7).

14. What is the equation in slope-intercept form of the line that passes through the points (2, 7) and (6, 7)? Describe the line.

15. What is the point-slope form of the line in the graph?
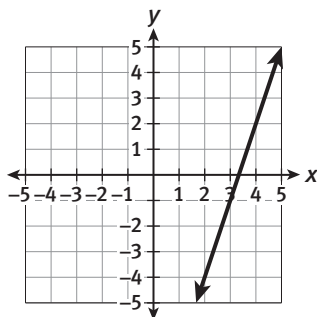
Lesson 12-3

16. Write the equation of the line in the graph from Item 15 in standard form.

17. David is ordering tea from an online store. Black tea costs $0.80 per ounce and green tea costs $1.20 per ounce. He plans to spend a total of $12 on the two types of tea.
   a. Write an equation that represents the different amounts of black tea, x, and green tea, y, that David can buy.
   b. Graph the equation.
   c. What is the x-intercept? What does it represent?
   d. Suppose David decides to buy 10 ounces of black tea. How many ounces of green tea will he buy?

18. Is the equation $6x − 15y = −12$ in standard form? Why or why not?

19. Which is a true statement about the line $x − 4y = 8$?
   A. The x-intercept of the line is (2, 0).
   B. The y-intercept of the line is (0, 2).
   C. The slope of the line is $\frac{1}{4}$.
   D. The line passes through the origin.

20. Write the equation of a line in standard form that has an x-intercept of (3, 0) and a y-intercept of (0, 5).

Lesson 12-4

21. What is the slope of a line parallel to a line whose equation is $3x + 5y = 12$?

22. What is the slope of a line perpendicular to a line whose equation is $−4x − 2y + 18 = 0$?

23. Which is the slope of a line that is perpendicular to the line whose equation is $5x − 3y = −10$?
   A. $\frac{3}{5}$ **B.** $-\frac{3}{5}$
   C. $\frac{5}{3}$ **D.** $-\frac{5}{3}$

24. What is the equation of the line that is perpendicular to $2x + 4y = 1$ and that passes through the point (6, 8)?

25. What is the slope of any line that is perpendicular to the line that contains the points (8, 8) and (12, 12)?

MATHEMATICAL PRACTICES
Construct Viable Arguments and Critique the Reasoning of Others

26. Aidan stated that for any value of b, the line $y = 2x + b$ is parallel to the line that passes through (2, 5) and (−1, −1). Do you agree with Aidan? Explain why or why not.