

2-3 Practice

Form G

Find the slope of the line through each pair of points.

1. (0, 1) and (3, 0)

2. $\left(\frac{1}{2}, \frac{2}{3}\right)$ and $\left(\frac{3}{2}, \frac{5}{3}\right)$

3. (-3, -2) and (1, 6)

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

5. (3, -5) and (1, 2)

6. (8, 9) and (8, 3)

7. (-3, -3) and (-1, -3)

8. $\left(\frac{1}{2}, \frac{1}{2}\right)$ and (-2, -4)

Write an equation for each line.

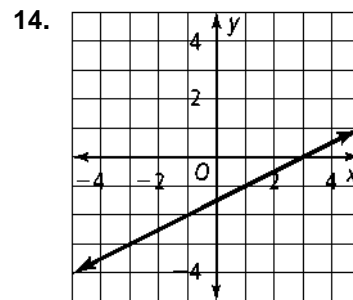
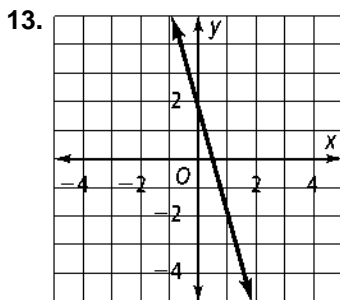
9. $m = -4$ and the y-intercept is 3.

10. $m = \frac{2}{5}$ and the y-intercept is $\frac{17}{5}$.

11. $m = 0$ and the y-intercept is -4.

12. $m = -1$ and the y-intercept is 2.

Find the slope and y-intercept of each line.



2-3 Practice (continued)

Form G

Find the slope and y-intercept of each line.

15. $3x - 4y = 12$

16. $y = -2$

17. $f(x) = \frac{5}{4}x + 7$

18. $x = 5$

19. $4x - 3y = -6$

20. $g(x) = -3x - 17.5$

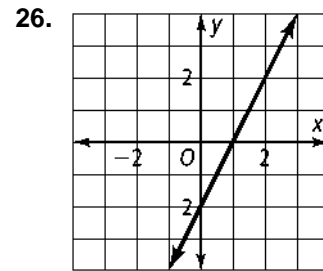
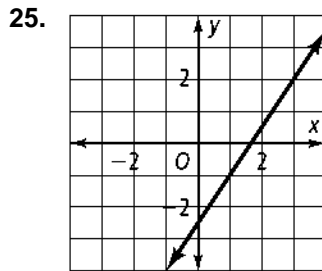
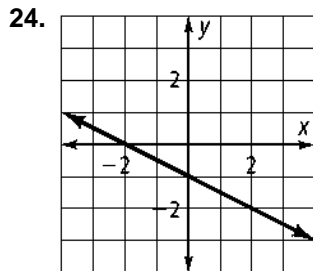
Graph each equation.

21. $4x + 3y = 12$

22. $\frac{x}{3} - \frac{y}{6} = 1$

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

Find the slope and y-intercept of each line.



27. The equation $e = 1200 + 11t$ represents your elevation e in feet for each minute t you hike from a trailhead.

- If you graphed this equation, what would the slope represent? Explain.
- Are you hiking uphill or downhill? Explain.

2-4 Practice

Form G

Write an equation of each line.

1. slope -2 ; $(2, 1)$

2. slope $= -1$; $(2, 0)$

3. slope $= 0$; $(-2, 3)$

4. slope $= \frac{3}{4}$; $(-3, 5)$

5. slope $= \frac{5}{9}$; $(10, 4)$

6. slope $= -\frac{1}{4}$; $(0, -1)$

Write in point-slope form an equation of the line through each pair of points.

7. $(-2, 3)$ and $(2, 9)$

8. $(0, 7)$ and $(3, 5)$

9. $(-2, -3)$ and $(2, -1)$

10. $(-5, -2)$ and $(-3, 8)$

11. $(-12, 20)$ and $(-21, 29)$

12. $(11, 8)$ and $(-2, -3)$

Write an equation of each line in standard form with integer coefficients.

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

14. $y = \frac{3}{2}x - \frac{1}{4}$

15. $y = 4.2x + 1.8$

16. $y = -\frac{4}{5}x + 5$

Find the intercepts and graph each line.

17. $x + 3y = -4$

18. $-5x - 2y = -6$

2-4 Practice (continued)

Form G

Write and graph an equation to represent each situation.

19. You have a \$30 gift card to an online music store. The gift card will allow you to purchase 5 albums.
20. You park your car in a parking garage for 6 hours. Your fee upon exiting the garage is \$42.

**Write the equation of the line through each point.
Use slope-intercept form.**

21. through (7, 1) and perpendicular to $y = -x + 3$
22. through (2, 9) and parallel to $y = 3x - 2$
23. through (3, 1) and perpendicular to $-4x + y - 1 = 0$
24. through (-6, 2) and perpendicular to $x = -2$

Graph each equation.

25. $3x + y = 4$ 26. $2x + 5y = 8$ 27. $-35x - 7y = 56$

28. **a.** Graph $y = 3x + 2$.
- b.** Write an equation of the line parallel to the line in part (a) passing through the point (2, 0). Graph the line on the same set of axes.
- c.** Write an equation of the line perpendicular to the line in part (a) passing through the point (0, -4). Graph the line on the same set of axes.
- d.** What is the relationship between the lines from part (b) and part (c)?