

Chapter Practice

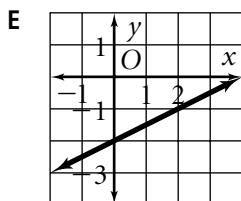
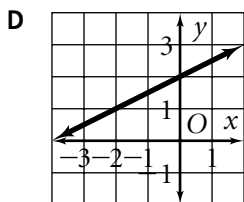
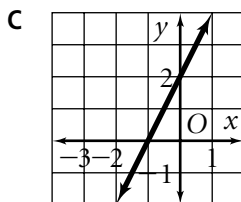
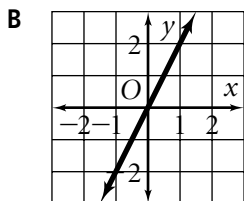
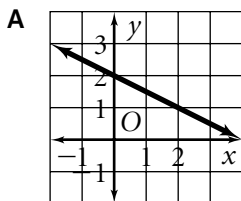
Chapter 2

For Exercises 1–8, choose the correct letter.

- Which of the following statements is true?
 - A A line with slope $m = 0$ is undefined.
 - B A line with an undefined slope is horizontal.
 - C A vertical line has no slope.
 - D A horizontal line where $y \neq 0$ has no x -intercept.
 - E A perpendicular line has an undefined slope.

- Which of the following is the graph of

$$y = \frac{1}{2}x + 2?$$



- Which of the following is the equation of a line that contains the point $(4, -3)$ and has a slope of $-\frac{2}{3}$?

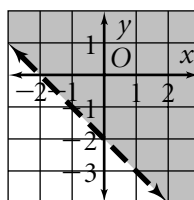
- A $y = -\frac{3}{4}x - \frac{2}{3}$
- B $y = -\frac{4}{3}x + \frac{2}{3}$
- C $y = -\frac{3}{2}x - \frac{4}{3}$
- D $y = -\frac{2}{3}x - \frac{1}{3}$
- E $y = \frac{2}{3}x - \frac{17}{3}$

- Which of the following best describes the difference between the graphs of a linear equation and a direct variation?
 - A The graph of a direct variation has no slope; the graph of a linear equation has a slope.
 - B The graph of a direct variation has no y -intercept; the graph of a linear equation has a y -intercept.
 - C The graph of a direct variation has an x -intercept only at $(0, 0)$; the graph of a linear equation can have an x -intercept anywhere.
 - D The graph of a direct variation is not a line; the graph of a linear equation is a line.
 - E The graph of a direct variation passes through the origin; the graph of a linear equation never passes through the origin.

- A line is written in standard form as $gx - y = h$. Which of the following is the slope of the line?

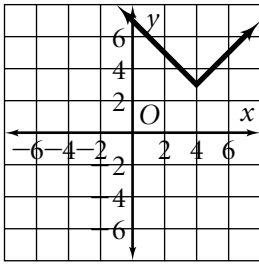
- A g
- B h
- C $-g$
- D $-h$
- E $\frac{g}{h}$

- Which of the following is the equation of this graph?



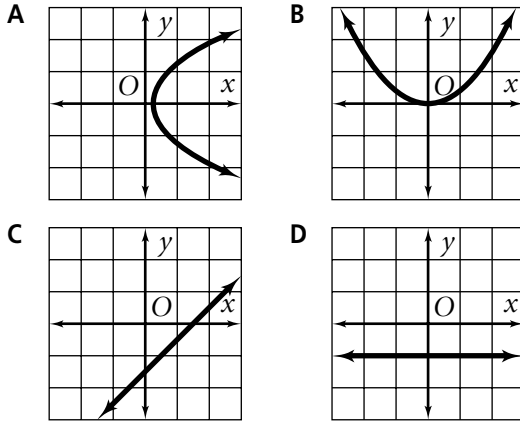
- A $y = -(x + 2)$
- B $y > x - 2$
- C $y \leq -x - 2$
- D $y < -x - 2$
- E $y + x > -2$

7. Which equation has the graph shown?



- A $y = (x - 4) + 3$ B $y = |x - 3| + 4$
 C $y = |x - 4| - 3$ D $y = |x + 4| - 3$
 E none of the above

8. Which is *not* the graph of a function?



For Exercises 9 and 10, compare the values in Column A and Column B. Choose the best answer.

- A The value in Column A is greater.
 B The value in Column B is greater.
 C The two values are equal.
 D The relationship cannot be determined on the basis of the information supplied.

Column A

Column B

9.

slope of line $y = \frac{7}{4}x + 16$
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slope of line $y = 2x - 14$

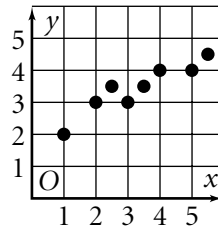
10.

x -intercept of a direct variation with $k = 4$
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x -intercept of a direct variation with $k = 8$
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For Exercises 11–16, write your answer.

11. Write the equation $y = 7x + 23$ in standard form.
 12. Graph $y = |x + 3| + 2$.
 13. **Open-ended** Describe a situation that could be modeled by a direct variation.
 14. Based on this scatter plot, what would be the approximate value of y when $x = 10$?



15. Two lines are perpendicular. The slope of one line is $-\frac{1}{8}$. What is the slope of the other line?
 16. What is the slope of the line passing through $(0, 3)$ and $(-3, 33)$?