PRACTICE TEST: Chapter 7 - Linear Equations

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

_____ 1. In the equation of a line, $y = mx + b$, the y-intercept is represented by the letter
   a. b
   b. m
   c. x
   d. y

_____ 2. Identify the equation of the line with a slope of -3 and a y-intercept of 4.
   a. $y = 3x + 4$
   b. $y = 3x - 4$
   c. $y = -3x + 4$
   d. $y = -3x - 4$

_____ 3. Rewrite the equation $y = -2x + 5$ in general form.
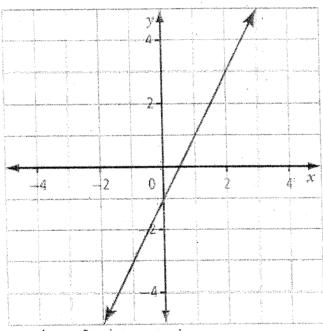   a. $-2x + y - 5 = 0$
   b. $-2x - y + 5 = 0$
   c. $2x - y + 5 = 0$
   d. $2x + y - 5 = 0$

_____ 4. What are the slope and y-intercept of this line?

   a. slope: -2, y-intercept: -1
   b. slope: -2, y-intercept: 1
   c. slope: 2, y-intercept: -1
   d. slope: 2, y-intercept: 1

_____ 5. For the line $3x - 4y - 12 = 0$, which statement is true?
   a. The x-intercept is 3 and the y-intercept is 4.
   b. The x-intercept is 3 and the y-intercept is -4.
   c. The x-intercept is 4 and the y-intercept is 3.
   d. The x-intercept is 4 and the y-intercept is -3.

_____ 13. What is the equation of the line that is perpendicular to the line $y = -3x + 2$ and passes through $(3, -1)$?

    a. $y = \dfrac{1}{3}x$

    b. $y = \dfrac{1}{3}x - 2$

    c. $y = -\dfrac{1}{3}x$

    d. $y = -\dfrac{1}{3}x - 2$

_____ 14. Identify the equation of the line parallel to $y = 2x - 4$ and with the same x-intercept as $3x - 4y = 12$.

    a. $y = 2x + 4$

    b. $y = 2x - 8$

    c. $y = -\dfrac{1}{2}x + 8$

    d. $y = -\dfrac{1}{2}x + 4$

_____ 15. Points G$(-3, 8)$ and H$(0, 5)$ are on a line. Which equation represents a line that is parallel to this line?
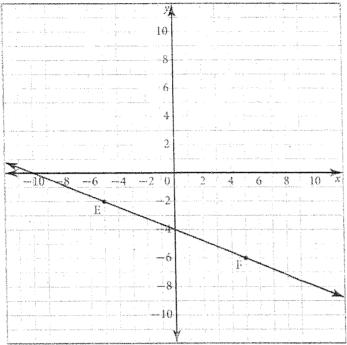
    a. $y = 2x - 8$

    b. $y = x - 5$

    c. $y = -x + 5$

    d. $y = -2x + 8$

Short Answer

1. Determine the slope and draw the graph of a line with x-intercept 5 and y-intercept -3.

4. Use the graph to answer parts a) to c).

a) Write the equation of the line passing through points E,F in point slope form.

b) Write the equation of this line in slope intercept form

c) Write the equation of this line in general form.

2. Points A(0, 12) and B(4, –4) are on a line.
   a) Plot points A and B and draw the line that passes through them.

   b) Determine the slope of the line.

   c) Make a table of values with x-values from 0 to 4.