Quiz 1.5: Forms of Linear Equations

Multiple Choice: *Choose the letter that corresponds to the correct answer. Write the answer in your answer sheet.*

1. Which formula can be used to find the slope if two points are given?

   A. $m = \dfrac{\text{rise}}{\text{run}}$ B. $y = mx + b$ C. $Ax + By = C$ D. $m = \dfrac{y_2 - y_1}{x_2 - x_1}$

2. If the graph of a line is given, which formula can be used to find the slope?

   A. $m = \dfrac{\text{rise}}{\text{run}}$ B. $y = mx + b$ C. $Ax + By = C$ D. $m = \dfrac{y_2 - y_1}{x_2 - x_1}$

3. Graphing linear equations can be done using any of these methods except:

   A. Using two points
   B. Using the x- and y-intercepts
   C. Using two slopes
   D. Using the slope and a point

4. What is the slope of a vertical line?

   A. Negative number B. Positive number C. Undefined D. Zero

5. The steepness of a line is called:

   A. Intercept B. Origin C. Slope D. Trend

6. What is the trend of a line with zero slope?

   A. Increasing B. Decreasing C. Horizontal D. Vertical

7. What is the slope of the line with the equation $y = 3x + 2$?

   A. 1 B. 2 C. 3 D. $\dfrac{3}{2}$

8. How do we find the x-intercept given the equation of a line?

   A. Let $a = 0$. B. Let $b = 0$. C. Let $x = 0$. D. Let $y = 0$.

9. Which of the following linear equations is written in the standard form?

   A. $\dfrac{2}{3}x + y = 2$ B. $2x + 3y = 4$ C. $3x = 2$ D. $-2y = 5$

10. In the slope-intercept form of linear equation $y = mx + b$, what does b represent?

    A. b-intercept B. Slope C. x-intercept D. y-intercept

11. What is the standard form of the line with the equation $y = \dfrac{1}{2}x + 3$?

    A. $x + 2y = 6$ B. $x - 2y = 6$ C. $x + 2y = -6$ D. $x - 2y = -6$

12. Find the slope of the line passing through $(-2, -4), (0, 3)$.

    A. $\dfrac{1}{2}$ B. $\dfrac{3}{2}$ C. $\dfrac{5}{2}$ D. $\dfrac{7}{2}$

13. Determine the trend of the line defined by $y = -3x + 7$.

    A. Increasing B. Decreasing C. Horizontal D. Vertical

14. Rewrite the equation $y = 3x - 8$ in the form $Ax + By = C$.

    A. $3x + y = -8$ B. $3x - y = -8$ C. $3x + y = 8$ D. $3x - y = 8$

15. Rewrite the equation $x + 2y = 4$ in the form $y = mx + b$

    A. $y = -\dfrac{1}{2}x + 2$ B. $y = \dfrac{1}{2}x + 2$ C. $y = -\dfrac{1}{2}x - 2$ D. $y = \dfrac{1}{2}x - 2$

Answer Key

1. Which formula can be used to find the slope if two points are given?

   Solution:

   A. $m = \dfrac{\text{rise}}{\text{run}}$ B. $y = mx + b$ C. $Ax + By = C$ D. $m = \dfrac{y_2 - y_1}{x_2 - x_1}$

2. If the graph of a line is given, which formula can be used to find the slope?

   Solution:

   A. $m = \dfrac{\text{rise}}{\text{run}}$ B. $y = mx + b$ C. $Ax + By = C$ D. $m = \dfrac{y_2 - y_1}{x_2 - x_1}$

3. Graphing linear equations can be done using any of these methods except:

   Solution:

   A. Using two points
   C. Using two slopes
   B. Using the x- and y-intercepts
   D. Using the slope and a point

4. What is the slope of a vertical line?

   Solution:

   A. Negative number B. Positive number C. Undefined D. Zero

5. The steepness of a line is called:

   Solution:

   A. Intercept B. Origin C. Slope D. Trend

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   Solution:

   A. Increasing B. Decreasing C. Horizontal D. Vertical

7. What is the slope of the line with the equation $y = 3x + 2$?

   Solution:

   A. 1 B. 2 C. 3 D. $\dfrac{3}{2}$

8. How do we find the x-intercept given the equation of a line?

   Solution:

   A. Let $a = 0$. B. Let $b = 0$. C. Let $x = 0$. D. Let $y = 0$.

9. Which of the following linear equations is written in the standard form?

   Solution:

   A. $\dfrac{2}{3}x + y = 2$ B. $2x + 3y = 4$ C. $3x = 2$ D. $-2y = 5$

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    Solution:

    A. b-intercept B. Slope C. x-intercept D. y-intercept

11. What is the standard form of the line with the equation $y = \dfrac{1}{2}x + 3$?

    Solution:

    A. $x + 2y = 6$ B. $x - 2y = 6$ C. $x + 2y = -6$ D. $x - 2y = -6$

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Solution:

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14. Rewrite the equation $y = 3x - 8$ in the form $Ax + By = C$.

Solution:

A. $3x + y = -8$ B. $3x - y = -8$ C. $3x + y = 8$ D. $3x - y = 8$

15. Rewrite the equation $x + 2y = 4$ in the form $y = mx + b$

Solution:

A. $y = -\frac{1}{2}x + 2$ B. $y = \frac{1}{2}x + 2$ C. $y = -\frac{1}{2}x - 2$ D. $y = \frac{1}{2}x - 2$