



Name _____ Period _____ Date _____

Vocabulary: Define each word and give an example.

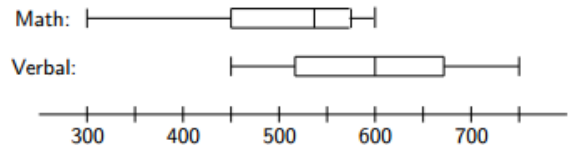
1. Standard Form of a Linear Equation
2. Parallel Lines
3. x -intercept

Short Answer:

4. What is the relationship of the equations of perpendicular lines? Write two equations of lines that are perpendicular.
5. Discuss why you might use Standard Form over Slope-Intercept Form to graph a line.

Review:

6. The boxplots below summarize the distribution of SAT verbal and math scores among students at a local high school. Which of the following statements are true?
 - I. The range of the math scores equals the range of the verbal scores.
 - II. The highest math score equals the median verbal score.
 - III. The verbal scores appear to be roughly symmetric, while the math scores appear to be skewed to the left.

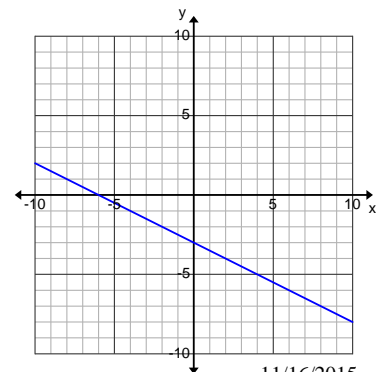


7. Solve the equation. $|2x - 1| - 6 = 13$
8. Write a recursive formula for the sequence 8, 10, 12, 14, 16, Then, find the next term.

Problems:

Be sure to show all work used to obtain your answer. Circle or box in the final answer.

9. Write the equation of the line shown in the graph in slope-intercept form.





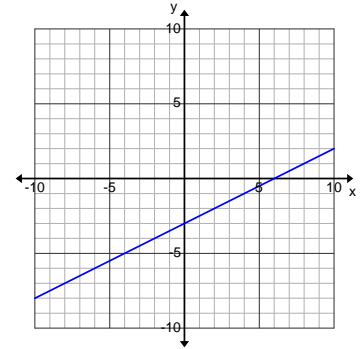
10. Shape Up Health club charges \$150 a year for the use of the club, machines and pool, plus \$20 per exercise class taken. Write a linear equation to represent the health club's yearly fees.
11. Write the equation of the line in slope-intercept form with a slope of $-\frac{2}{3}$ that passes through the point $(-6, 1)$
12. Write the equation of the line in point-slope form with a slope of $\frac{3}{5}$ that passes through the point $(-2, 4)$.
13. Write an equation of the line that passes through the points $(-3, 7)$ and $(4, 0)$ in slope-intercept form.
14. Write the equation $y = \frac{3}{2}x + 6$ in standard form with integer coefficients.
15. Write the equation of the line that passes through the points $(-3, -8)$ and $(1, -2)$ in standard form with integer coefficients.



16. Write the equation of the line that passes through $(-4, 2)$ and is parallel to the line $2x - y = 7$ in slope-intercept form.

17. Write the equation of the horizontal line that passes through the point $(2, 3)$.

18. Write the equation of the line shown in the graph in standard form.



19. Write the equation of the line that is perpendicular to $y = 3x - 6$ and passes through the point $(0, 5)$ in slope-intercept form.

20. Mr. Thompson is on a diet. He currently weighs 260 pounds. He loses 4 pounds per month.

a. Write a linear model that represents Mr. Thompson's weight after m months.

b. After how many months will Mr. Thompson reach his goal weight of 220 pounds?

Multiple Choice Question: **Circle the best answer.**

21. Write an equation of a line that has the same slope as $2x - 5y = 12$ and the same y-intercept as $4y + 24 = 5x$.

A. $y = \frac{2}{5}x - 6$

C. $y = \frac{5}{2}x - 6$

B. $y = 6x - \frac{2}{5}$

D. $y = \frac{1}{6}x - \frac{5}{2}$



22. Are the graphs of the lines in the pair parallel? Explain.

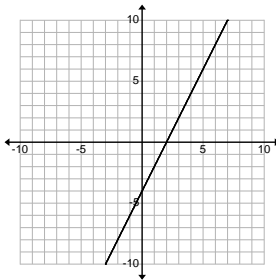
$$y = \frac{1}{6}x + 8 \text{ and } -2x + 12y = -11$$

- A. Yes, since the slopes are the same and the y-intercepts are the same.
- B. No, since the y-intercepts are different.
- C. Yes, since the slopes are the same and the y-intercepts are different.
- D. No, since the slopes are different.

23. What are the intercepts of the graph of the equation $5x + 4y = 12$?

- A. x-intercept = $\frac{12}{5}$, y-intercept = 4
- B. x-intercept = 5, y-intercept = 4
- C. x-intercept = $\frac{12}{5}$, y-intercept = 3
- D. x-intercept = 5, y-intercept = 3

24. Use the graph below.



What is the equation of the line in the graph?

- A. $-2x - 4y = 8$
- B. $-4x + 2y = 8$
- C. $2x - 4y = 8$
- D. $4x - 2y = 8$

25. Some ordered pairs for a linear function of x are given in the table at the right.

Which of the following equations was used to generate the table?

x	1	3	5	7	9
y	1	7	13	19	25

- A. $y = 2x - 2$
- B. $y = 2x - 1$
- C. $y = 3x - 2$
- D. $y = 6x - 5$