



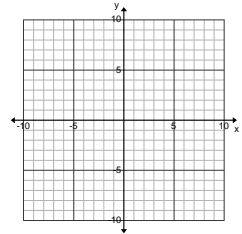
Name _____ Period _____ Date _____

Vocabulary: Define each word and give an example.

1. Origin (of the coordinate plane)
2. Slope
3. Root of a Linear Function

Short Answer:

4. Label the four quadrants of the coordinate plane and name a point in Quadrant III.
5. What is the slope of a vertical line? Give an example of an equation of a vertical line.
6. Describe how to determine which half-plane to shade when graphing a linear inequality.



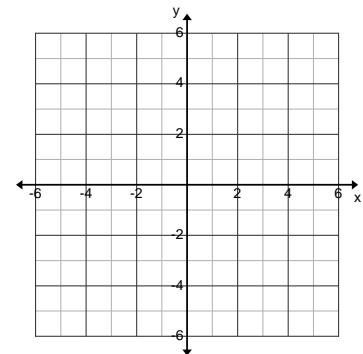
Review:

7. Solve the compound inequality: $7 < 3 - 4x < 27$
8. A secretary can type 5 pages in 28 minutes. How long will it take the secretary to type 12 pages?
9. Solve the equation $A = \frac{1}{2}h(b_1 + b_2)$ for b_1 .
10. Evaluate the function for the given value of x : $f(x) = x^2 + 4x - 7$; $x = -2$

Problems:

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

11. Plot the points in the coordinate plane. Label each point.

 Point A $(0, 4)$, Point B $(-1, 3)$, Point C $(-2, 0)$, Point D $(-5, -3)$




12. Determine if the ordered pair is a solution to the linear equation/inequality. Show all of your work to justify your answer.

a. $(3, -8)$; $3x - y = 1$

b. $(9, -2)$; $y > 2x - 20$

13. Complete the table for the function $y = 4 - \frac{2}{3}x$ and graph.

x	-6	-3	0	3	6
y					

14. Graph the lines $x = -3$ and $y = 4$ and determine the point of intersection.

Point of Intersection: _____

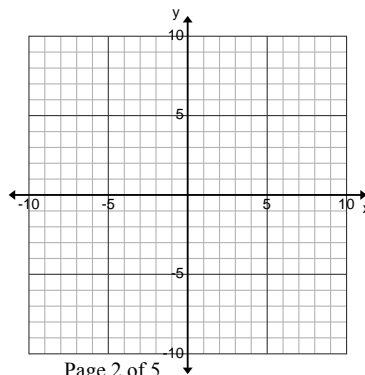
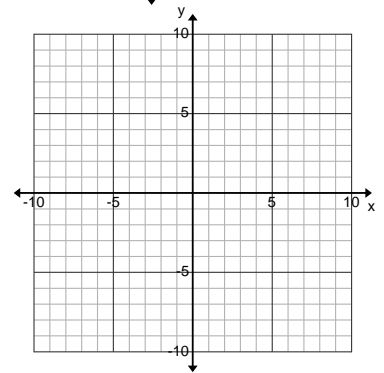
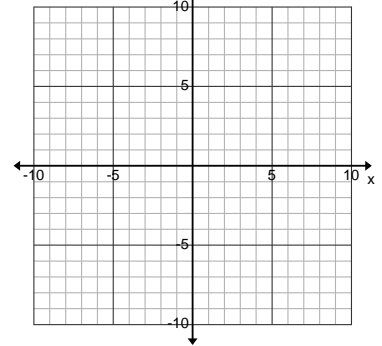
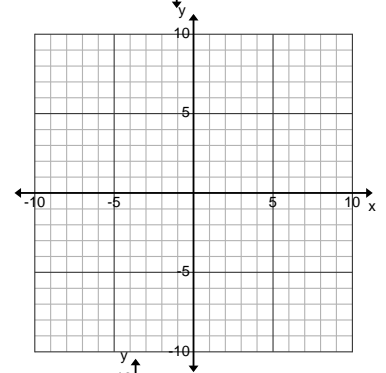
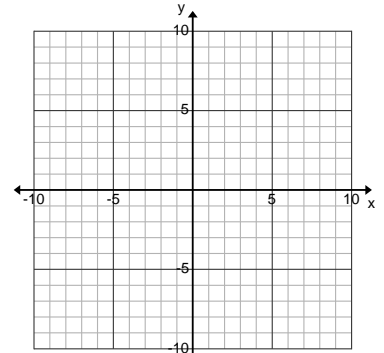
15. Find the x - and y -intercepts of the line $3x - 5y = 30$, then graph the line.

x -intercept: _____ y -intercept: _____

16. Find the slope and y -intercept of the line $y = -\frac{3}{4}x + 6$, then graph the line.

Slope: _____ y -intercept: _____

17. Graph the line $5x - 10 = 2y$ using the method of your choice.





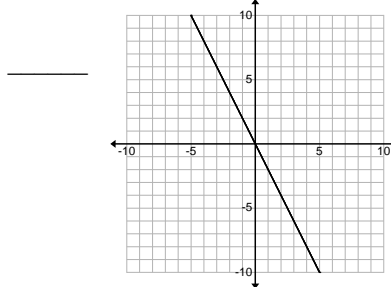
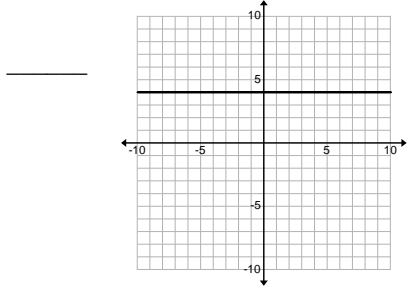
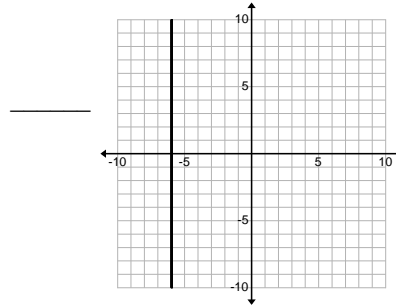
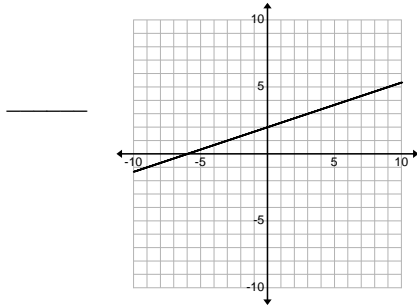
18. Match each graph with the type of slope. Write the corresponding letter of the type of slope on the line provided by each graph.

A. Positive Slope

B. Negative Slope

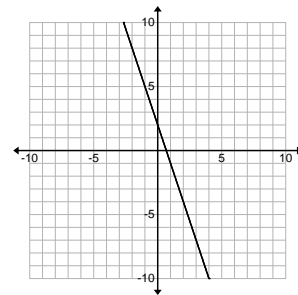
C. Zero Slope

D. Undefined Slope



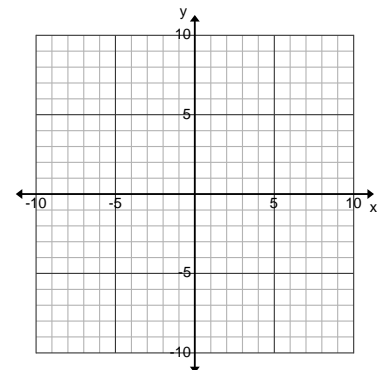
19. Find the slope of the line that passes through the points $(-4, 8)$ and $(-6, -2)$.

20. Find the slope of the line shown in the graph.



21. It is about 360 miles from New York City to Pittsburgh. Tim makes the trip in $6\frac{1}{2}$ hours. What was Tim's average speed? Use correct units in your answer.

22. Graph the equation $y = 3x - 6$.

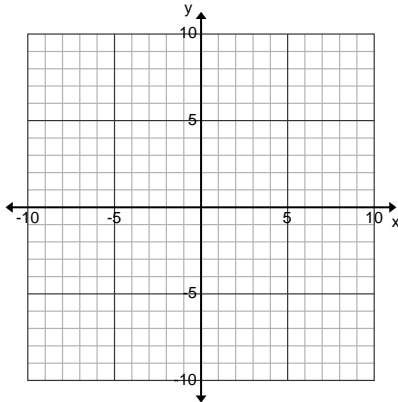


23. Using the definition of slope, discuss why the slope of a horizontal line is zero.

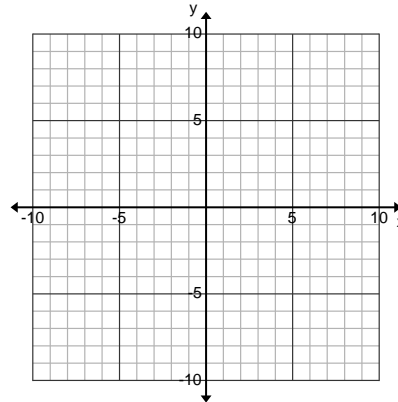


24. Graph the linear inequality.

a. $y \leq -\frac{1}{3}x$



b. $3x - y < 6$



25. Determine whether the tables below represent a **linear** or **nonlinear** function. Explain your answer.

x	1	4	7	10
y	0	9	18	27

x	3	5	7	9
y	1	6	12	20

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

26. Which statement about the comparison between the graphs of $y = 2x - 1$ and $y = 5x - 1$ is correct?

- A. The graph of $y = 5x - 1$ is steeper than the graph of $y = 2x - 1$.
- B. The graph of $y = 5x - 1$ is less steep than the graph of $y = 2x - 1$.
- C. The graph of $y = 5x - 1$ is shifted 3 units up from the graph of $y = 2x - 1$.
- D. The graph of $y = 5x - 1$ is shifted 3 units down from the graph of $y = 2x - 1$.

27. What is the slope of the line that passes through the points $(4, 6)$ and $(-4, 9)$?

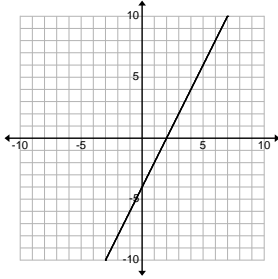
- A. $-\frac{3}{8}$
- B. 0
- C. $-\frac{8}{3}$
- D. undefined



28. 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

29. 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. $4x - 2y = 8$

30. Which graph correctly represents $-3y \leq 8x - 6$?

