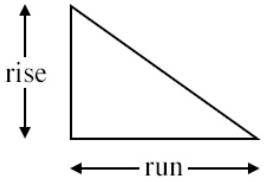
In the study of lines on a graph, one of the important qualities to examine is the slope. The slope refers to the steepness of the line. When thinking of slope, it can be considered as the ratio of **rise** over **run.**

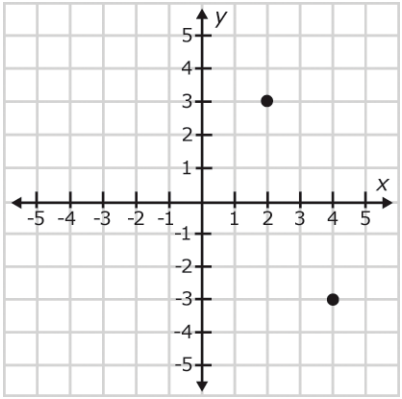
Slope (m) of a line = $\frac{rise}{run}$ or $m = \frac{y_2 - y_1}{x_2 - x_1}$



To find the **equation of a line** use the **slope intercept formula:**
y = m x + b, where y = the y coordinate, m = slope and b = y intercept.

To determine the **distance between two points** on a graph, use the following formula:
$d = \sqrt{(x_x - x_1)^2 + (y_x - y_1)^2}$ where x_2, x_1, y_2, y_1, and y refer to coordinates in ordered pairs $(x_2 - x_1)$ and $(y_2 - y_2)$

Select the best answer to the following questions and type it on the line provided.



1. Find the slope of a line that passes through points (2, 3) and (4, -3). _____

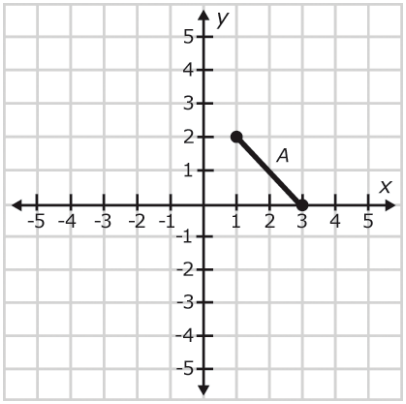
   a. 0
   b. -1
   c. -2
   d. -3

2. Find the coordinates of the y-intercept of a line that passes through the points (2, 3) and (4, -3). _____

   a. b = -3
   b. b = 3
   c. b = -9
   e. b = 9

3. What are the coordinates of the slope of the line y= -4x + 3? _____

   a. (0, 3)
   b. (0, -4)
   c. (3, 0)
   d. (-4, 0)



4. What is the equation of Line A? _____

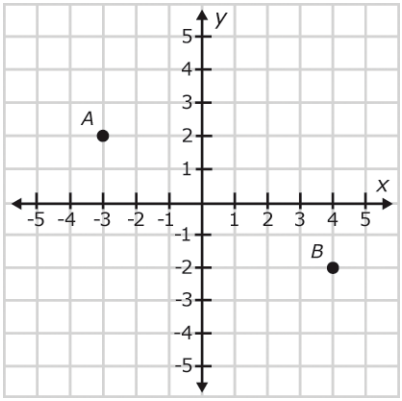
   a. y = -1(x) + 3
   b. y = -x - 3
   c. y = 2x + 3
   d. y = -3x + 2

5. Find the distance between points (4, 1) and (1, 5). _____

   a. 2
   b. 3
   c. 4
   d. 5

6. The distance between two points (5, 2) and (6, 4) is: _____

   a. between 1 and 2
   b. between 2 and 3
   c. between 3 and 4
   d. between 4 and 5



7. What is the distance between points A and B on the graph? _____

a. 4.03
b. 5.5
c. 8.06
d. 9