

Name \_\_\_\_\_

8A; Algebra 1

Date \_\_\_\_\_

Period \_\_\_\_\_

## What is Coordinate Geometry?

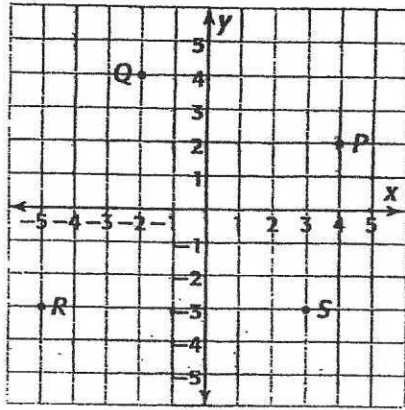
### Word Box

coordinate plane	coordinates
ordered pair	abscissa
quadrants	ordinate
x-axis	origin
y-axis	

Complete the following sentences:

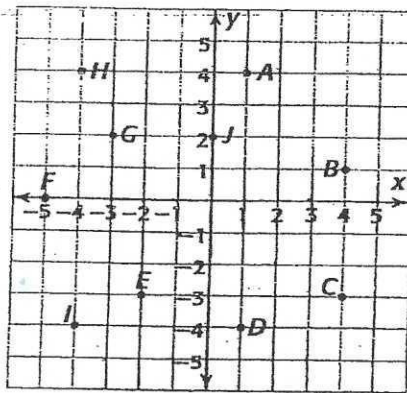
- 1) A plane is formed by the intersection of a horizontal number line with a vertical number line. A \_\_\_\_\_ is a two-dimensional surface on which points are plotted and located by their x and y coordinates.
- 2) The horizontal line is called the \_\_\_\_\_.
- 3) The vertical line is called the \_\_\_\_\_.
- 4) The point where the axes cross is called the \_\_\_\_\_, and this point is represented by the \_\_\_\_\_ (0,0).
- 5) Other points are represented by ordered pairs according to their distance with respect to each axis. The ordered pair (-2,3) corresponds to -2 on the x-axis and 3 on the y-axis. Each ordered pair is a set of \_\_\_\_\_ for the point it names.
- 6) The x-coordinate is called the \_\_\_\_\_.  
The y-coordinate is called the \_\_\_\_\_.  
A point is the graph of its ordered pair.
- 7) The x-axis and the y-axis divide the graph into four regions called \_\_\_\_\_.  
The signs of the coordinates in each quadrant are:  
Quadrant I: \_\_\_\_\_                      Quadrant II: \_\_\_\_\_  
Quadrant III: \_\_\_\_\_                      Quadrant IV: \_\_\_\_\_

8) Use an ordered pair to name the location of each point.



a. P	b. Q	c. R	d. S
_____	_____	_____	_____

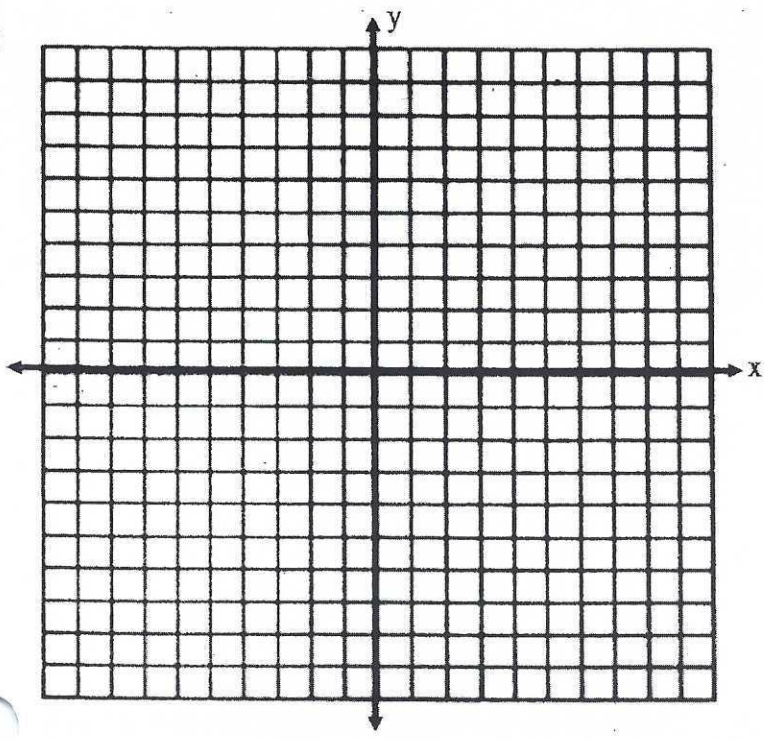
9) Name the point that has the given coordinates. Give the quadrant for each point.



Coordinates	Point	Quadrant
a. $(-5, 0)$		
b. $(4, -3)$		
c. $(-4, 4)$		
d. $(0, 2)$		
e. $(-2, -3)$		
f. $(4, 1)$		

How Can We Find The Distance Between Two Points On The Coordinate Plane?

1)



(a) Plot the points below and connect them to form segment AB.

A (-2, 3)    B (5, 3)

(b) What is the length of segment AB?

AB = \_\_\_\_\_

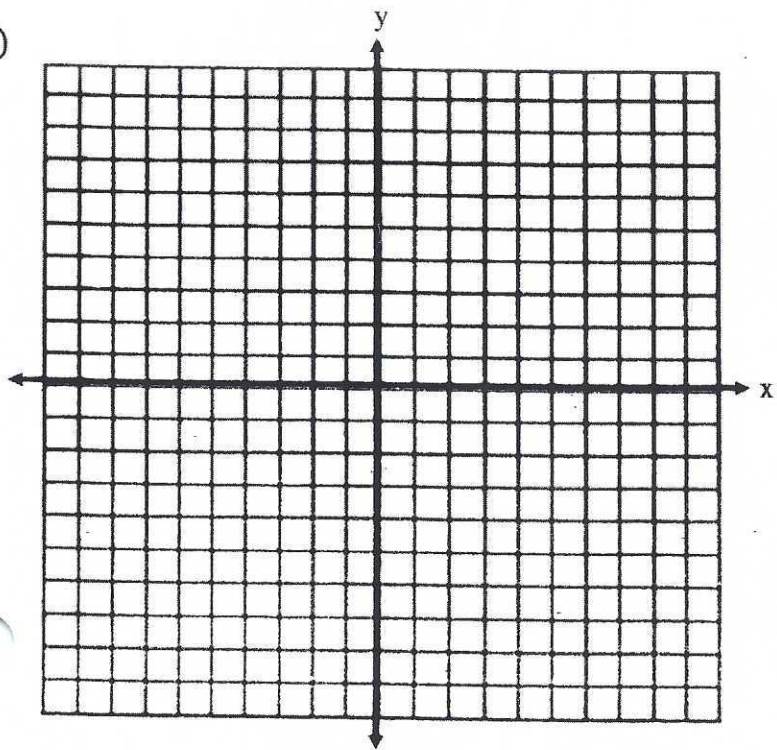
(c) Plot the points below and connect them to form segment CD.

C (4, 1)    D (4, -7)

(d) What is the length of segment CD?

CD = \_\_\_\_\_

2)



(a) Plot the points below and connect them to form segment AB.

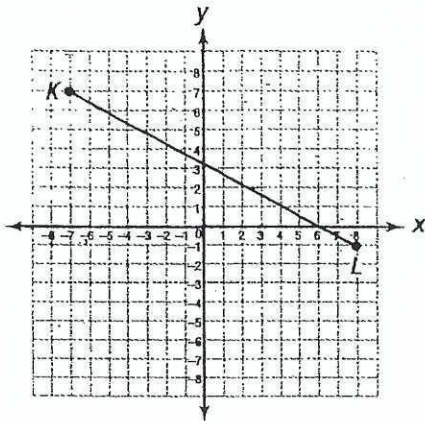
A (-3, 10)    B (5, -5)

(b) What is the length of segment AB?

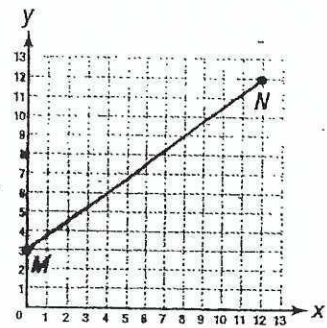
AB = \_\_\_\_\_

#3 + #4: Determine the length of each line segment. Show your work.

3

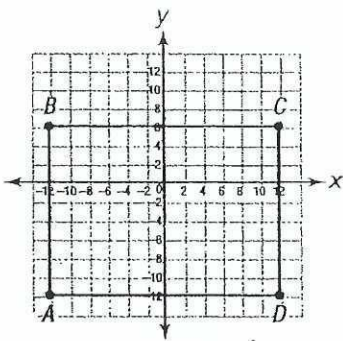


4



5

**DRAW** Draw a diagonal for rectangle ABCD and calculate its length. Is it possible to draw a different diagonal for this rectangle that has a different length? Explain.



6

Approximate the length of the hypotenuse to the nearest tenth without using a calculator.

