Name: *Mr. Hagen*

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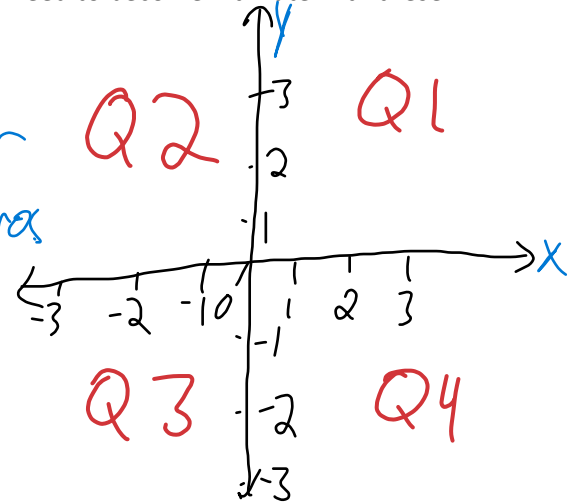**Learning Goal:** We are learning how to use the coordinate grid system.

In this chapter and the next, we will learn a lot of new vocabulary. You need to become intimate with these words, so let's first define them, then draw/label them!

Coordinate Plane

- it is a grid made up of two number lines which cross at their zeros

Quadrants

4 - the four corners.

x-axis

- the horizontal number line.

y-axis

- the vertical number line

x-coordinate

- the value or location on the x-axis

y-coordinate

- the value or location on the y-axis

} just numbers

Ordered Pair

- 2 things in order.

- the x and y coordinates are paired together and written as (x, y)

ex: (2, -3)
    x   y

↳ a point.

Origin

- middle

(0, 0)

Example 1:   Graph the following points on the given grid.

A (3 , 4)   B (-1, 4)

C (4, -2)   D (-5, -4)

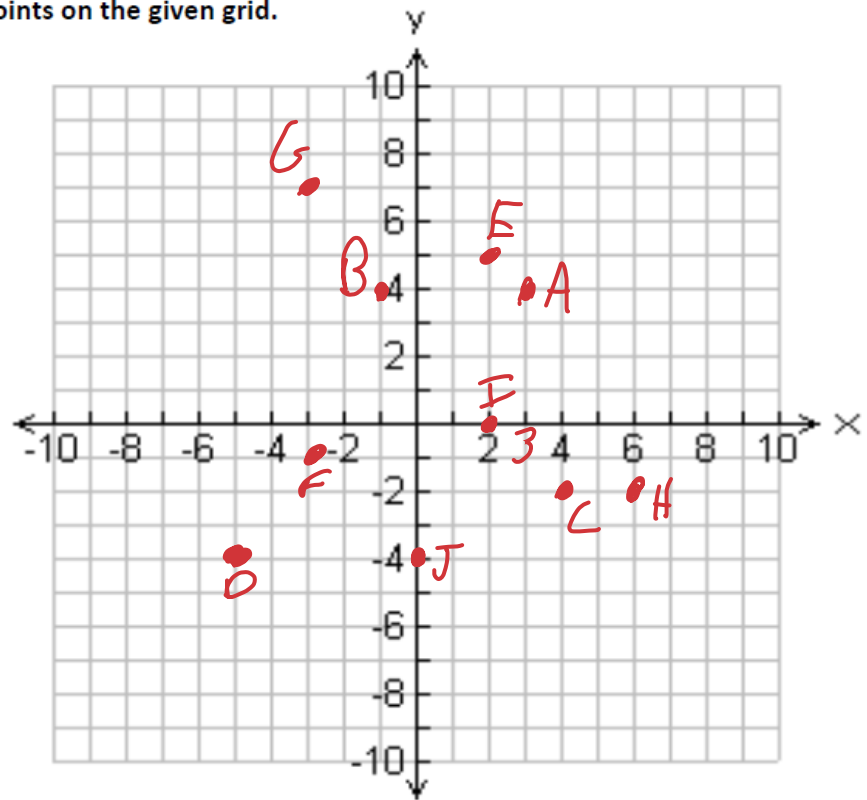E (2, 5)   F (-3, -1)

G (-3, 7)   H (6, -2)

I (2 , 0)   J (0 , -4)

Example 2:   Calculate the area of a triangle with vertices at A(-5,-3), B(3,-3), and C(3,8)

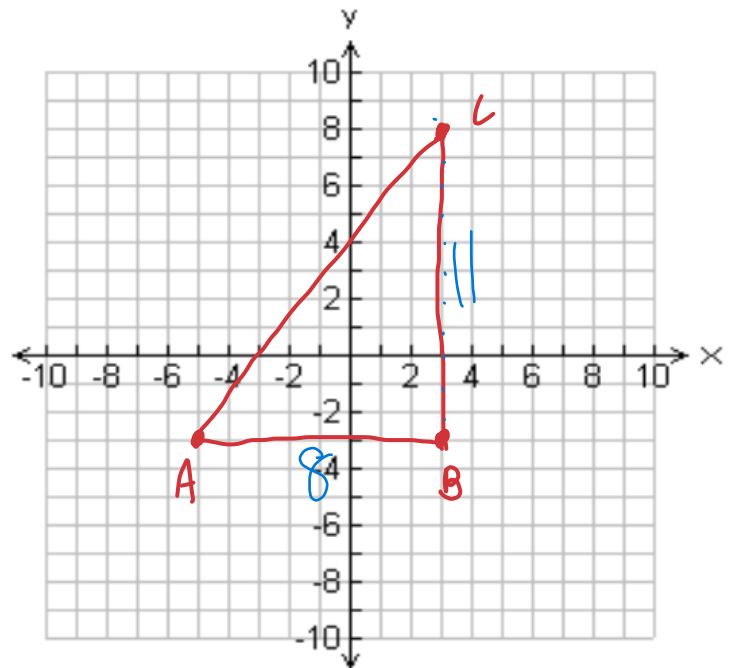**Step 1:** Plot the points and connect the points to form a triangle
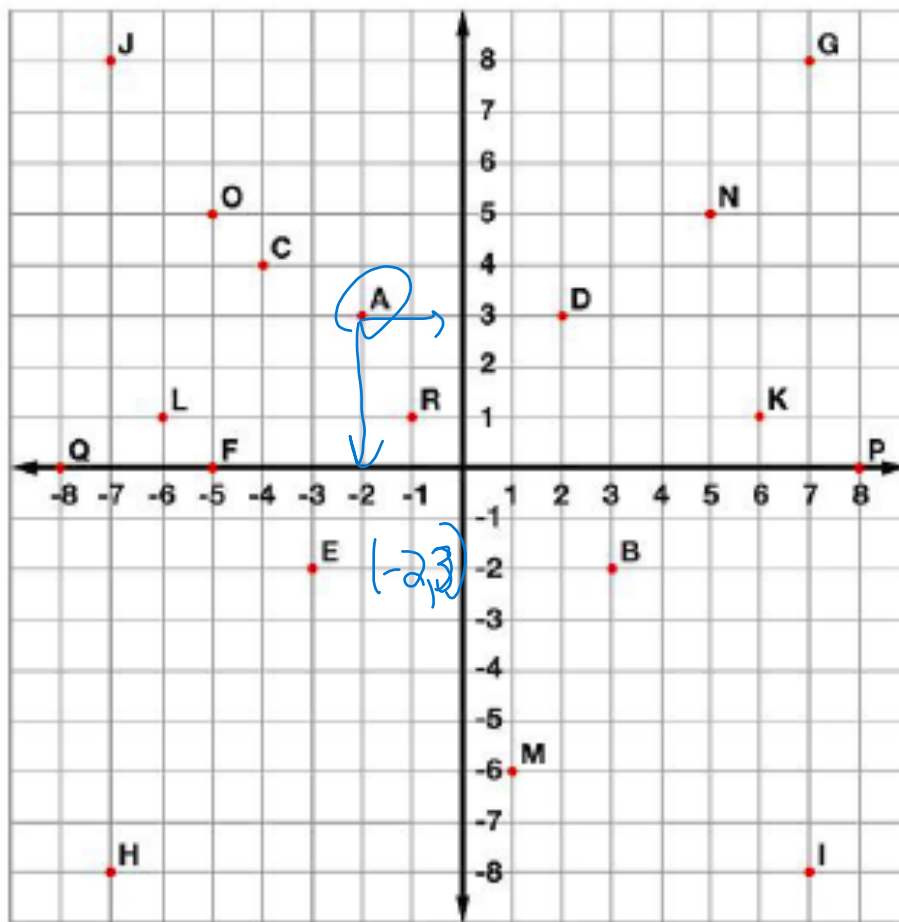**Step 2:** Find the length of the base and height

$$A = \frac{bh}{2}$$

$$A = \frac{(8)(11)}{2}$$

$$A = 44u^2$$

Step 3: Calculate the area

Tell what point is located at each ordered pair.

1. (3,-2) **B**

2. (2,3) **D**

3. (-5,5) **O**

4. (-7,-8) **H**

5. (-4,4) **C**

6. (-5,0) **F**

Write the ordered pair for each given point.

7. E (-3,-2)

8. M (1,-6)

9. P (8,0)

10. G (7,8)

11. Q (-8,0)

12. N (5,5)

Plot the following points on the coordinate grid.

13. S (-6,-3)

14. T (2,-4)

15. U (5,8)

Success Criteria:
- I can define the important key terms that are used in the coordinate grid system
- I can tell the difference between the "x" and "y" coordinates in an ordered pair
- I can find an ordered pair on a coordinate grid