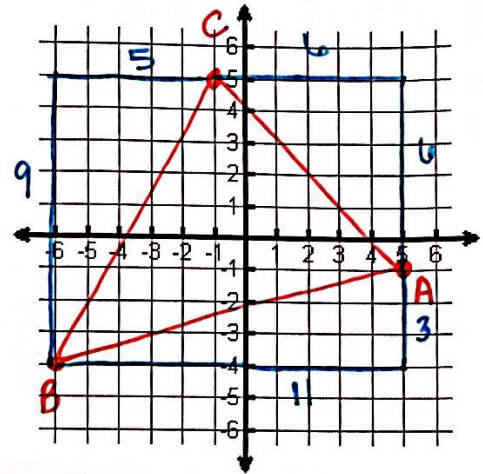


Day 1 – Distance and Midpoint Formula – Practice

Problem 1

- Adventureland is centered at the 5 units east and 1 unit south.
- Blank Zoo is located 6 units west and 4 units south.
- Saylorville Lake is located 1 unit west and 5 units north.



- A. Plot Adventureland. Label it as point A. What is the ordered pair? (5, -1)
- B. Plot the Blank Zoo. Label it as point B. What is the ordered pair? (-6, -4)
- C. Plot Saylorville Lake. Label it as point C. What is the ordered pair? (-1, 5)
- D. Connect all three points.

Using the distance formula, ^{or Pythagorean} find the distance (show all your work). Round to the nearest hundredths.

E. AB

$$3^2 + 11^2 = c^2$$

$$\sqrt{130} = \sqrt{c^2}$$

$$c = 11.4$$

F. AC

$$6^2 + 6^2 = c^2$$

$$\sqrt{72} = \sqrt{c^2}$$

$$c = 8.5$$

G. BC

$$9^2 + 5^2 = c^2$$

$$\sqrt{106} = c^2$$

$$c = 10.3$$

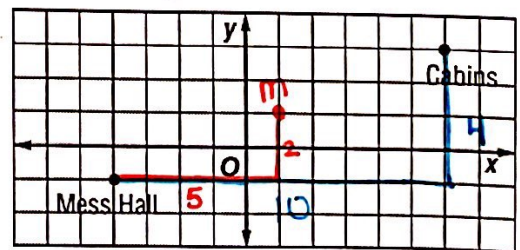
H. Classify the triangle (scalene, isosceles, or equilateral). Scalene

I. Explain your reasoning:

none of the sides are the same length.

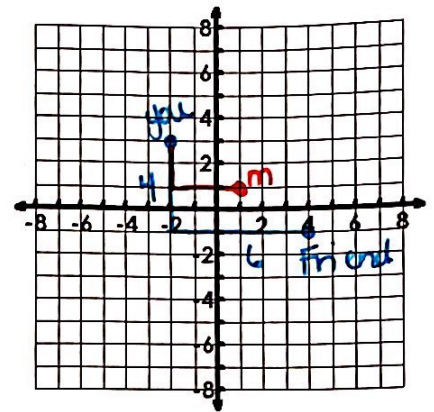
Problem 2: Troop 175 is designing their new campground by first mapping everything on a coordinate grid. They have found a location for the mess hall and for their cabins. They want the bathrooms to be halfway between these two. What will be the coordinates of the location of the bathrooms?

m(1, 1)



Problem 3: You and a friend go hiking. You hike 3 miles north and 2 miles west. Starting from the same point, your friend hikes 4 miles east and 1 mile south. If you and your friend wanted to meet for lunch, where could you meet so that both of you hike the same distance?

$$m(1,1)$$



Problem 4: Determine the other endpoint given one of the endpoints and the midpoint.

a. Endpoint $A(0, 3)$ and Midpoint $M(3, 5)$

b. Endpoint $A(-2, 5)$ and Midpoint $M(4, -1)$

$$B(6, 7)$$

$$B(10, -7)$$

