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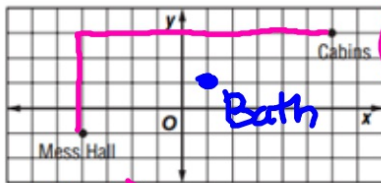
**CAMPGROUND** Troop 175 is designing their new campground by first mapping everything on a coordinate grid. They have found a location for the mess hall and for their cabins. They want the bathrooms to be halfway between these two. What will be the coordinates of the location of the bathrooms?

*Midpoint*
*Distance*

*Midpoint*

*unknown*

(6,3)

*Bath*

(-4,-1)

1. What formula do we use to solve the problem to the left? How do you know?
We use the __Midpoint__ formula because...

We are finding the halfway (middle point) between the cabins and mess hall.

2. What are the coordinates of the mess hall? (-4,-1)
Coordinates of the cabins? (6,3)

$x_1, y_1$
$x_2, y_2$

3. Solve for the coordinates of the bathrooms. Show all work.

$$M = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$M = \left( \frac{-4 + 6}{2}, \frac{-1 + 3}{2} \right)$$

$$M = \left( \frac{2}{2}, \frac{2}{2} \right)$$

$$M = (1, 1)$$