

b) C of A are two pts of (c) with center I (proved)
 J is the center of (c') the image of (c) by \overrightarrow{CA} (given)

$$\text{So, } \overrightarrow{IJ} = \overrightarrow{CA}$$

$$x_J - x_I = x_A - x_C$$

$$x_J - 0 = -4 + 1$$

$$x_J = -4 + 1$$

$$x_J = -3$$

$$y_J = -3$$

$$\text{Thus, } J(-3, 3)$$

$$\text{and } y_J - y_I = y_A - y_C$$

$$y_J - 0 = 2 + 2 - 1$$

$$y_J = 2 + 2 - 1$$

$$y_J = 3$$

3rd - exercise:

part-A:

- 1) population is the set of 20 pieces of clothes in the store.
 • statistical unit is each piece of cloth. in the store
 • Character is the type of clothes in the store.
 it is qualitative, since it is not numeral (can't be measured)

$$2a) \text{ Size } n = \sum_{i=1}^4 n_i$$

$$20 = \underbrace{(2x - y + 4)}_m + \underbrace{(-2x + 3y + 10)}_m + \underbrace{(x + y - 1)}_m + \underbrace{(2xy - 2)}_m$$

$$20 = 3x + 3y + 11$$

$$\text{then, } (3x + 3y = 9) \div 3$$

$$\text{hence, } \boxed{x + y = 3}$$

Sum of central angles in a semi-circular diagram is 180°

$$\text{So, } \underbrace{(x - 2y + 25)}_m + \underbrace{(-2x + 3y + 25)}_m + \underbrace{(2x + 2y + 78)}_m + \underbrace{(3x - y + 42)}_m = 180^\circ$$

$$4x + 2y + 170 = 180$$

$$\text{hence, } (4x + 2y = 10) \div (2) \text{ hence, } \boxed{2x + y = 5}$$