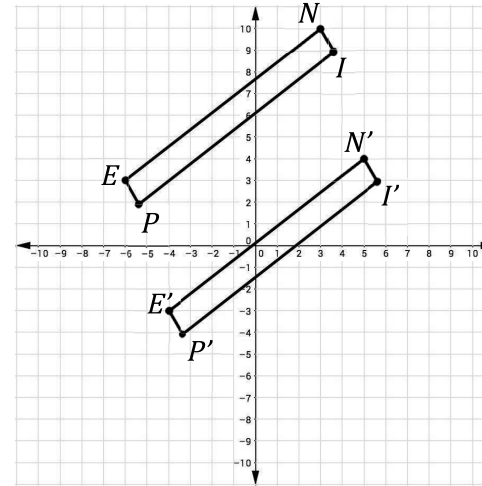


Section 4 – Topic 4 Translations of Polygons

Describe the translation of rectangle $PINE$.

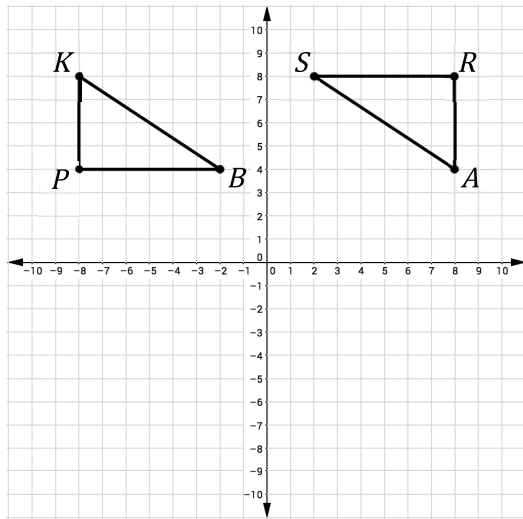


- The original object and its image are _____.
- In other words, the two objects are identical in every respect except for their _____.

Draw line segments linking a vertex in the original image to the corresponding vertex in the translated image. Make observations about the line segments.

Let's Practice!

1. Consider the two right triangles below.



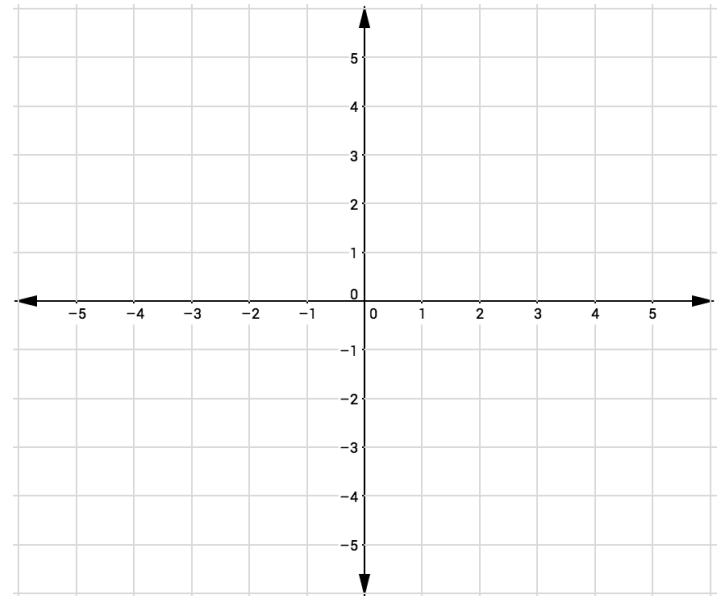
Rectangle *PARK* is formed when right triangles *PBK* and *RSA* are translated. *PARK* has vertices at $P(-3, 4)$, $A(8, 4)$, $R(8, 8)$, and $K(-3, 8)$.

Describe how rectangle *PARK*'s location on the coordinate plane is possible with only one translation for *PBK* and one translation for *RSA*.

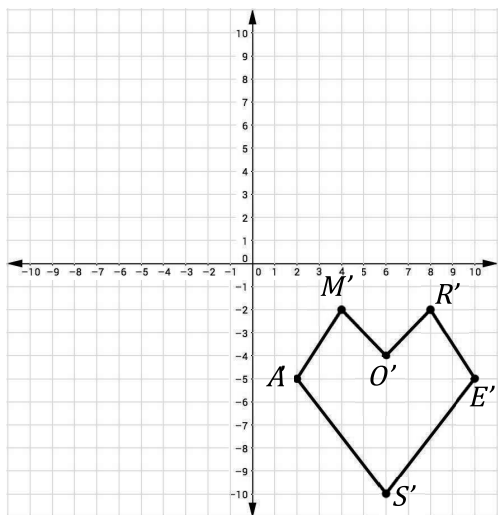
Try It!

2. $C(0, -1)$, $A(-2, 2)$, $M(2, 4)$, $P(3, 0)$ is transformed by $(x, y) \rightarrow (x - 2, y - 1)$.

- What is the x - coordinate of A' ?
- What is the y - coordinate of P' ?
- Show the translation on the coordinate plane below.



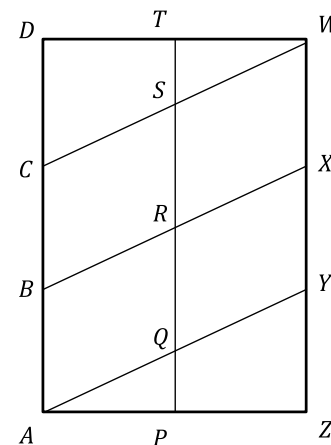
3. Polygon $A'M'O'R'E'S'$ is the image of polygon $AMORES$ after a translation $(x + 8, y - 7)$.



What are the original coordinates of each point of polygon $AMORES$?

BEAT THE TEST!

1. Consider the figure below.



If R is the image of A after a translation, then which point is the image of Q under the same translation?