

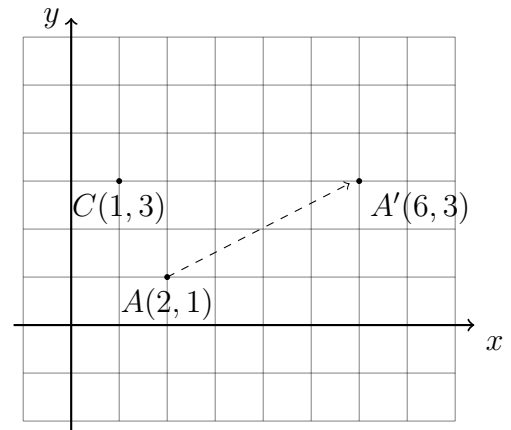
4.7 Prequiz Transformations

1. A translation maps A to A' , as shown, $A(2, 1) \rightarrow A'(6, 3)$.

(a) What is the horizontal shift, how many squares right or left?

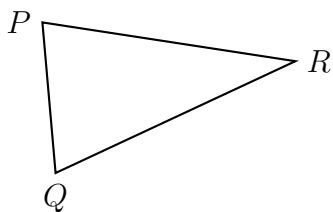
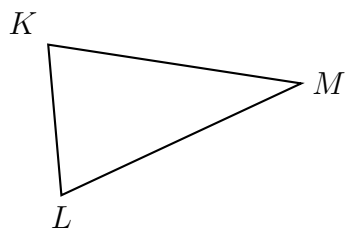
(b) What is the vertical shift, how many squares up or down?

(c) Apply the same translation to $C(1, 3) \rightarrow C'(x, y)$. On the grid, mark and label the point C' as an ordered pair.



2. A translation maps triangle KLM onto triangle PQR .

Fill in the blank with each corresponding object.



(a) $K \rightarrow$ _____

(b) $\angle L \cong$ _____

(c) $\overline{KL} \cong$ _____

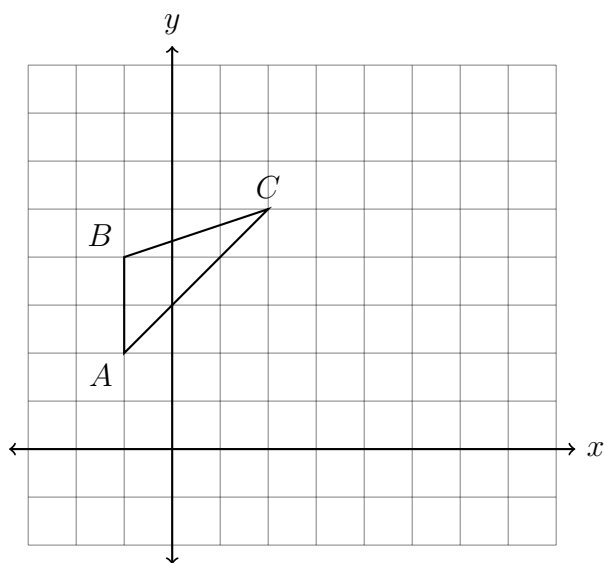
- (d) Which statement best justifies $\triangle KLM \cong \triangle PQR$?

A dilation centered at point K with a scale factor $k = 2$ was performed.

Since translation is a rigid motion, the triangle's size and shape remains the same.

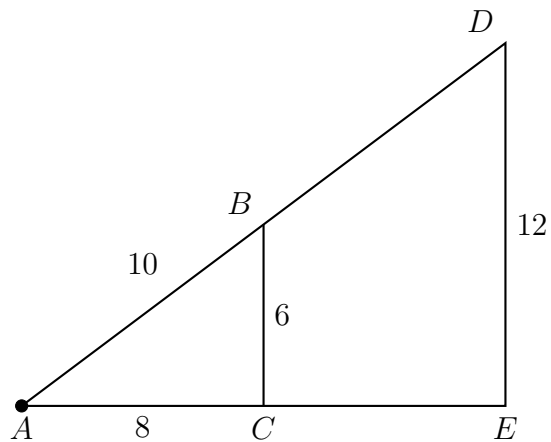
3. A translation maps $X(1, 6) \rightarrow X'(3, 9)$. What is the image of $Y(2, -2)$ under the same translation?

4. Translate $\triangle ABC$ by $(x, y) \rightarrow (x + 5, y + 2)$. Make a table of the coordinates and plot and label the image on the axes.

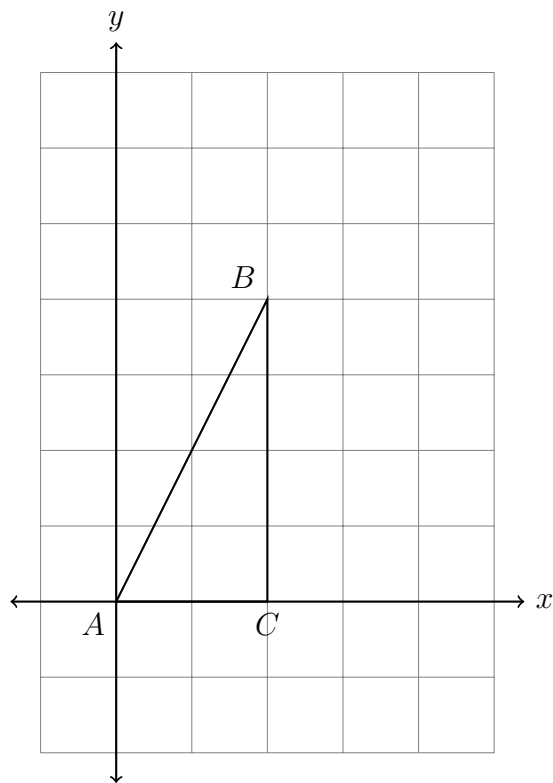


5. A dilation centered at A with scale factor $k = 2$ maps $\triangle ABC \rightarrow \triangle ADE$. Given the sides of the preimage, $AC = 8$, $BC = 6$, $AB = 10$.

$DE = 12$, how long are AD and AE ?

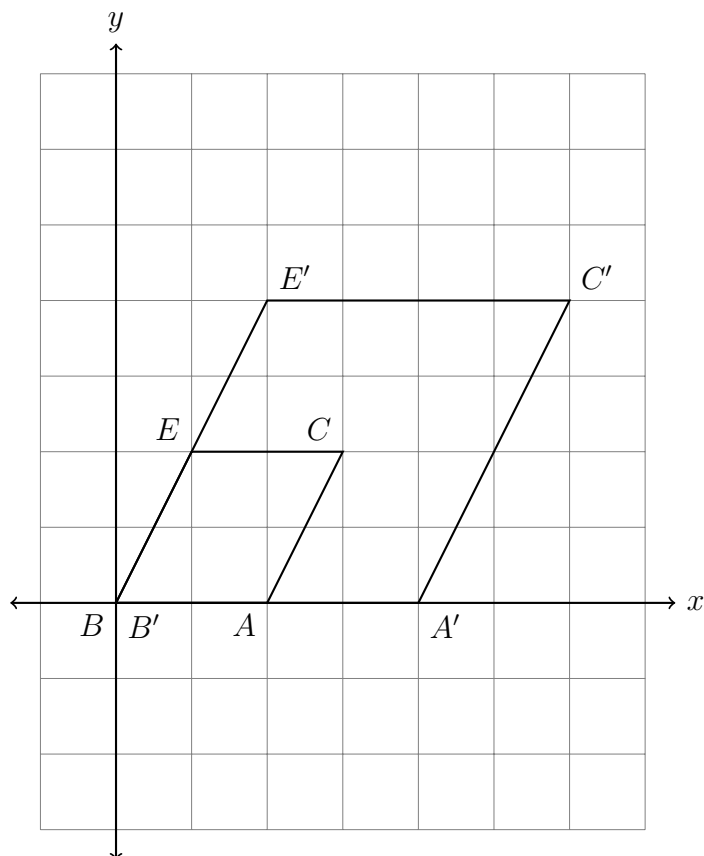


6. Dilate $\triangle ABC \rightarrow \triangle A'B'C'$ by a factor of $k = 1.5$ centered at the origin, $(x, y) \rightarrow (2x, 2y)$. Plot and label the image on the axes. Make a table of the vertices and their coordinates.



7. A transformation is performed on a parallelogram, $BECA \rightarrow B'E'C'A'$, as shown in the diagram.

Fully characterize the transformation. (hint: Translations must include both x and y directions and magnitudes. Dilations must specify the center and scale factor.)



8. Dilate $\triangle ABC \rightarrow \triangle A'B'C'$ by a factor of $k = 3$ centered at the origin, $(x, y) \rightarrow (3x, 3y)$. Plot and label the image on the axes. Make a table of the vertices and their coordinates.

