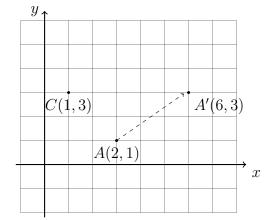
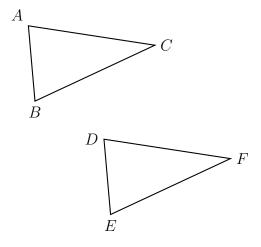
4.8 Quiz Transformations

- 1. A translation maps A to A', as shown, $A(3,1) \rightarrow A'(6,3)$.
 - (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 $C(1,3) \to C'(x,y)$. On the grid, mark and label the point C' as an ordered pair.



2. A translation maps triangle ABC onto triangle DEF.

Fill in the blank with each corresponding object.



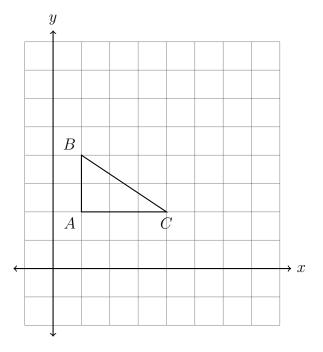
- (a) $A \rightarrow \underline{\hspace{1cm}}$
- (b) $\angle B \cong \underline{\hspace{1cm}}$
- (c) $\overline{AB} \cong \underline{\hspace{1cm}}$
- (d) Which statement best justifies $\triangle ABC \cong \triangle DEF$?

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

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

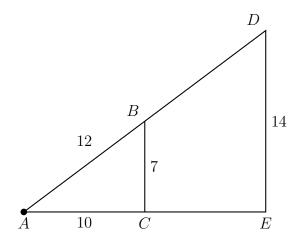
3. A translation maps $P(3,5) \to P'(2,9)$. What is the image of Q(-3,2) under the same translation?

4. Translate $\triangle ABC$ by $(x,y) \rightarrow (x+4,y-1)$. Make a table of the coordinates and plot and label the image on the axes.

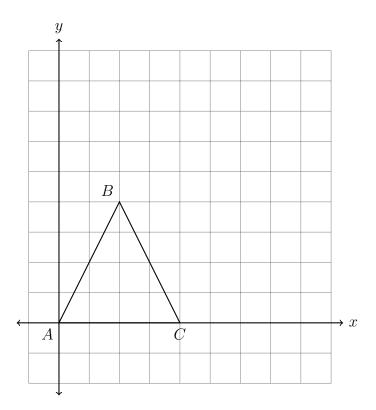


5. A dilation centered at A with scale factor k=2 maps $\triangle ABC \rightarrow \triangle ADE$. Given the sides of the preimage, $AC=10,\ BC=7,\ AB=12.$

DE = 14, how long are AD and AE?

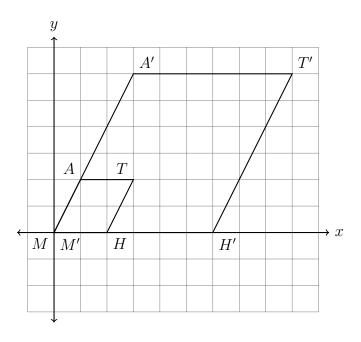


6. Dilate $\triangle ABC \rightarrow \triangle A'B'C'$ by a factor of k=1.5 centered at the origin, $(x,y) \rightarrow (1.5x,1.5y)$. Plot and label the image on the axes. Make a table of the vertices and their coordinates.



7. A transformation is performed on a parallelogram, $MATH \rightarrow M'A'T'H'$, as shown in the diagram.

What is the transformation? (Hint: Is it a translation, reflection, rotation, or dilation? What is its center? What is the scale factor, k?)



8. Dilate $\triangle ABC \rightarrow \triangle A'B'C'$ by a factor of k=2.5 centered at the origin, $(x,y) \rightarrow (2.5x,2.5y)$. Plot and label the image on the axes. (table optional)

