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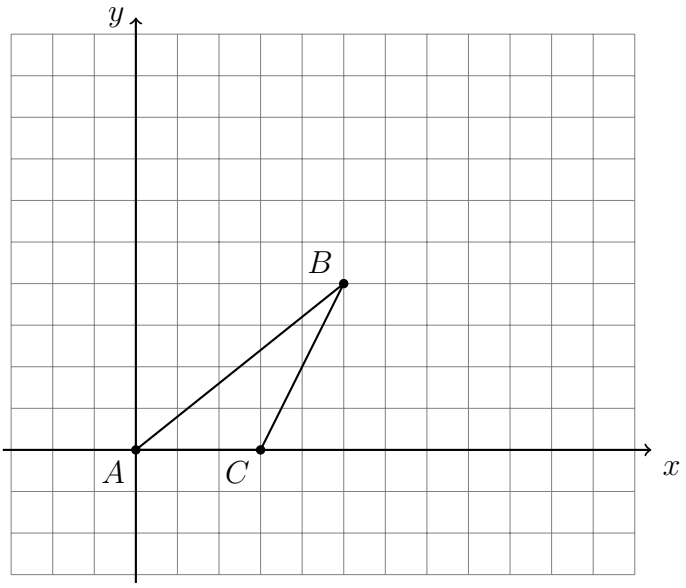
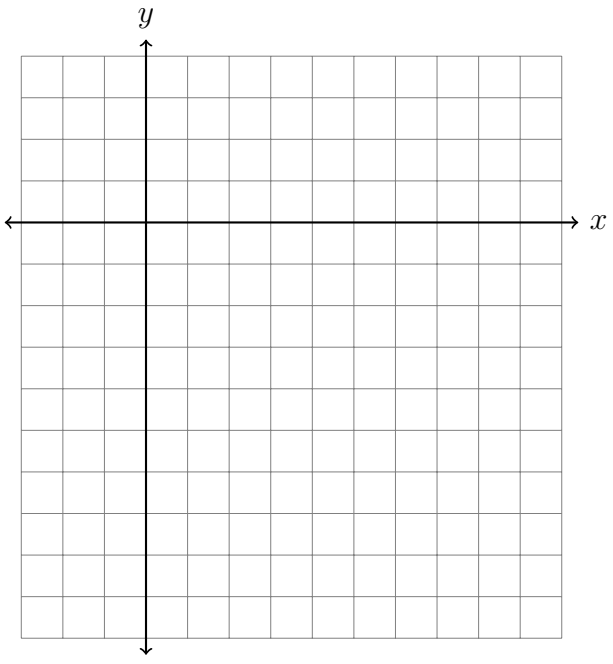
7-10bDN-Transformations

1. Apply a dilation mapping $\triangle ABC \to \triangle A'B'C'$ with a factor of $k = 2$ centered at (0.0). Draw and label the image on the grid and make a table of the coordinates.



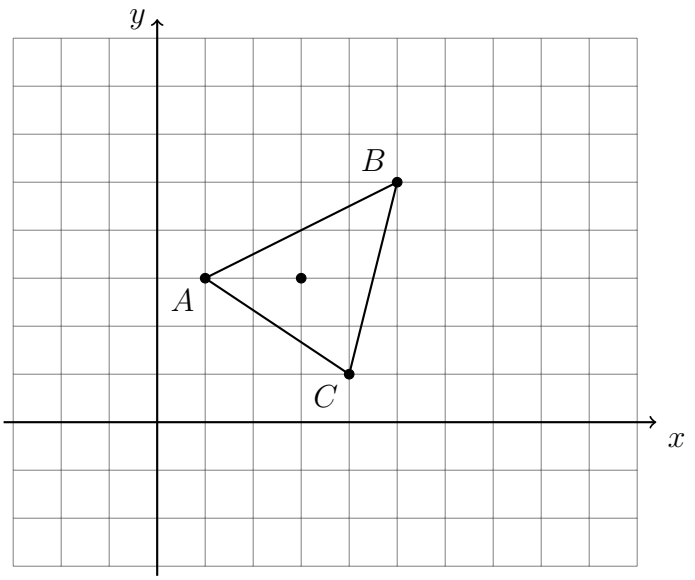
2. After a dilation centered at the origin, the image of $\overline{AB}$ is $\overline{A'B'}$. If the coordinates of the endpoints of these segments are $A(-1,-3)$, $B(4,-5)$, $A'(-2,-6)$, and $B'(8,-10)$, find the scale factor of the dilation.

   Make a table of coordinate pairs and graph the two line segments, $\overline{AB}$ and $\overline{A'B'}$, on the set of axes below.

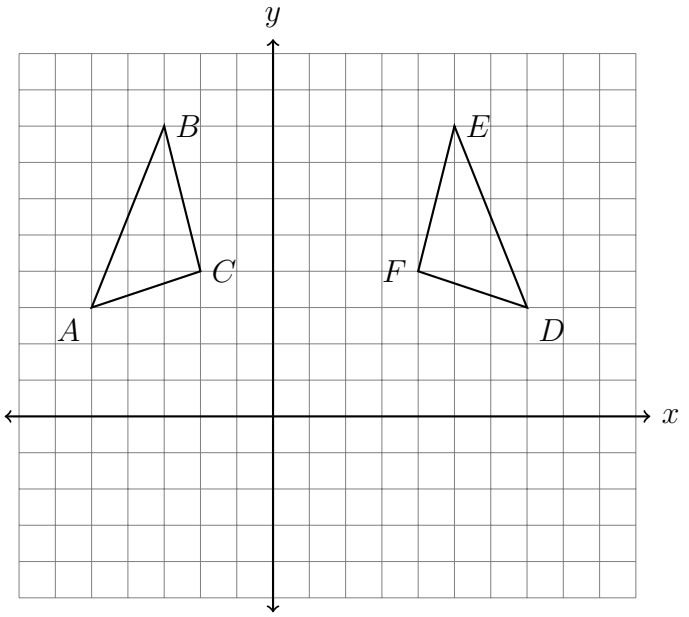


3. Find the image of $P(3, 5)$ after a translation up 3 and to the left 7.

4. Apply a dilation mapping $\triangle ABC \to \triangle A'B'C'$ with a factor of $k = 2$ centered at $(3, 3)$. Draw and label the image on the grid and make a table of the coordinates.



5. What transformation maps $\triangle ABC$ onto $\triangle DEF$, shown below? Fully specify the transformation.



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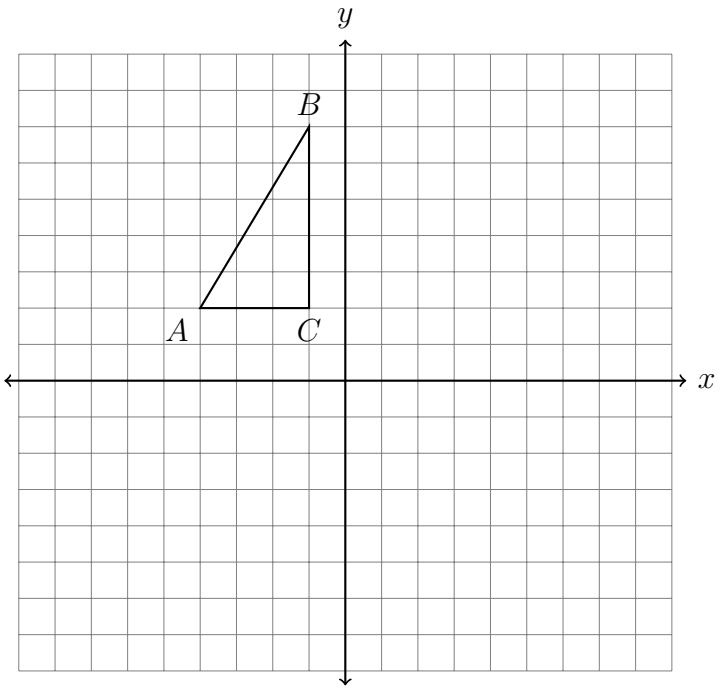
6. Plot two transformations. Rotate $\triangle ABC$ clockwise 90° around the origin, then reflect the result across the x-axis. Make a table of the coordinates and plot and label the images on the axes.



7. A translation maps $A(-2, 1) \to A'(5, 1)$. What is the image of $B(3, -1)$ under the same translation?

8. Reflect $\triangle ABC$ over the y-axis. Plot and label the image on the axes and make a table of the coordinates showing $\triangle ABC \to \triangle A'B'C'$.