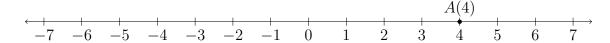
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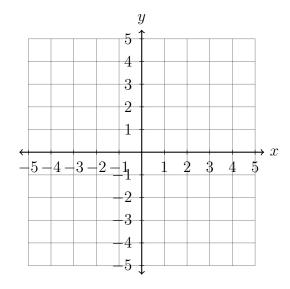
## 8.2 Classwork: Reflection

## CCSS.HSG.CO.A.5

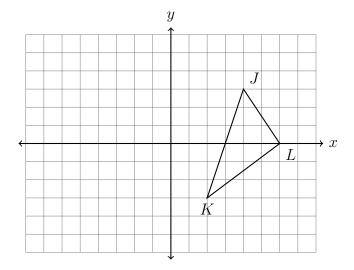
1. Reflect the point A(4) across the origin. (flip the number line) Mark and label it A'.



2. On the axes below, graph the point P(-4,3) and its image, P', after a reflection across the x-axis. Mark P' and write it down as a coordinate pair.

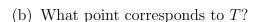


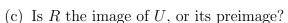
- 3. A reflection maps Q(4,3) onto Q'(4,-3). Is the reflection across the x-axis or the y-axis?
- 4. Reflect  $\triangle JKL$  across the y-axis, labeling the image  $\triangle J'K'L'$ .

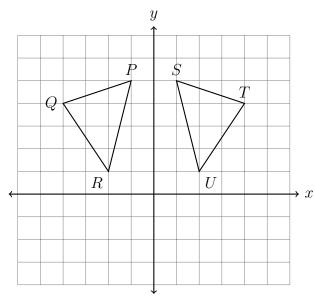


5. Triangle A'B'C' is the image of triangle ABC after a reflection. Is triangle ABC congruent to A'B'C'? Explain why.

- 6. In the graph below, a transformation maps  $\triangle PQR$  onto  $\triangle STU$ .
  - (a) Completely identify the transformation.



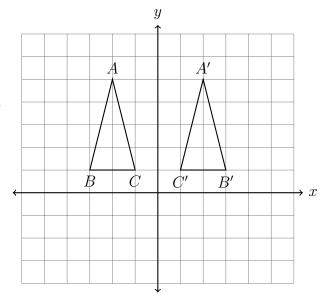




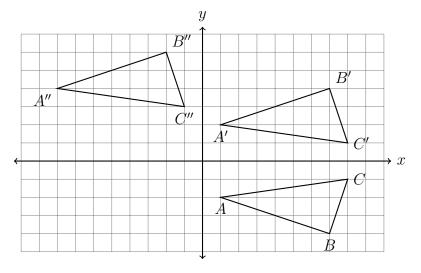
7. In the graph below, a transformation maps  $\triangle ABC \rightarrow \triangle A'B'C'$ .

Angie says the triangle must have been reflected across the y-axis. Robbie says it might have been reflected, but it could also have been translated to the right.

Who is correct? Justify your answer.

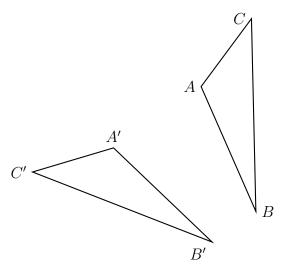


8. Two transformations have been applied to a triangle in the diagram below,  $\triangle ABC \rightarrow \triangle A'B'C' \rightarrow \triangle A''B''C''$ . Fully characterize each transformation.

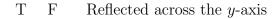


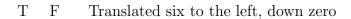
9. A reflection maps  $\triangle ABC \rightarrow \triangle A'B'C'$ . Which triangle has the larger area, the preimage or the image (or neither)? Justify your answer.

10. Draw the line of reflection that would map  $\triangle ABC$  onto  $\triangle A'B'C'$ .



11. Which of the following would map  $\triangle CAT \rightarrow \triangle C'A'T'$ ?

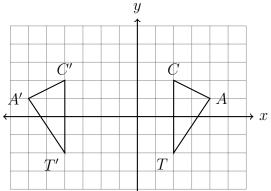




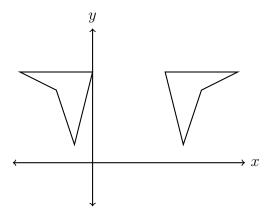
T F Reflected across the 
$$y$$
-axis, then slid to the left two

T F 
$$(x,y) \to (x-6,y+0)$$

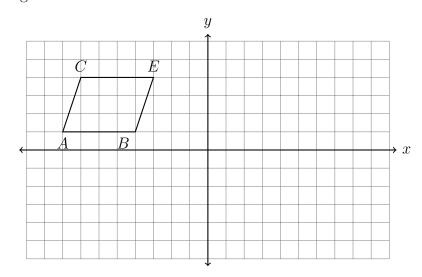
T F Reflected across the line 
$$x = -1$$



12. Draw the line of reflection for quadrilaterals in the diagram below.



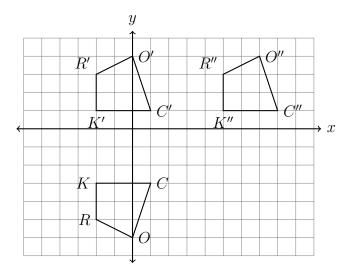
13. First reflect the trapezoid BECA across the x-axis, then move it down 1 and right 7. Label the images B'E'C'A' and B''E''C''A''.



of transformations applied.

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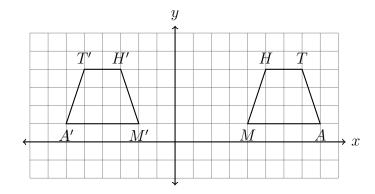
14. The quadrilateral ROCK undergoes rigid motions, shown below. Describe the sequence



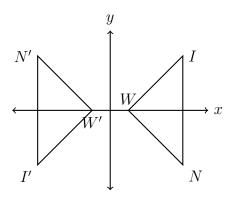
15. The quadrilateral MATH is mapped to M'A'T'H' by a rigid motion. What transformation a been applied?



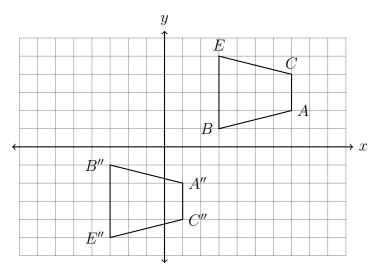
- (b) Reflection
- (c) Rotation
- (d) Translation



16. Given  $\triangle WIN \cong \triangle W'I'N'$ . Describe the rigid motion mapping  $\triangle WIN \to \triangle W'I'N'$ .



17. Determine and state the sequence of transfromations applied to map BECA to B''E''C''A''.



18. Determine and state the transformation mapping  $\triangle NOP$  onto  $\triangle QRP$ .

