9.9b Quiz: Rigid motions, translation, reflection, rotation (No Calculator)
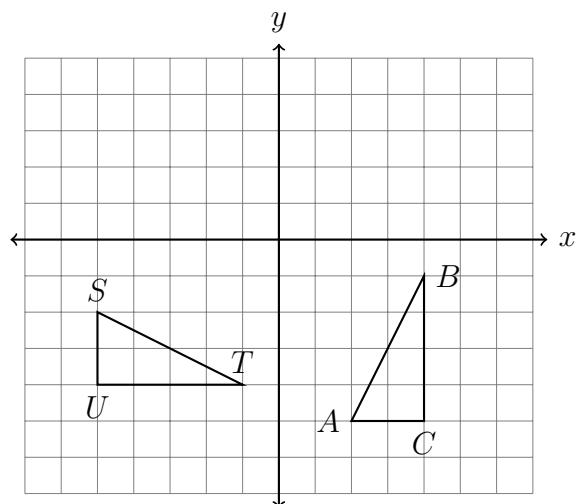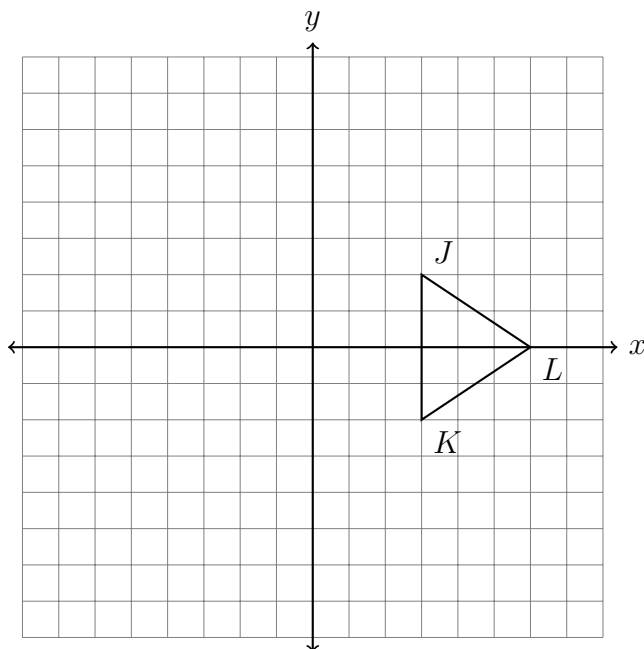
1. State the translation that would map $M(-2,9)$ onto $M'(-1,8)$.

2. On the set of axes below, $\triangle ABC \cong \triangle STU$.

   Describe the rigid motion that maps $\triangle ABC$ onto $\triangle STU$.

3. Rotate $\triangle JKL$ 90° clockwise around the origin on the axes below, labeling the image $\triangle J'K'L'$.
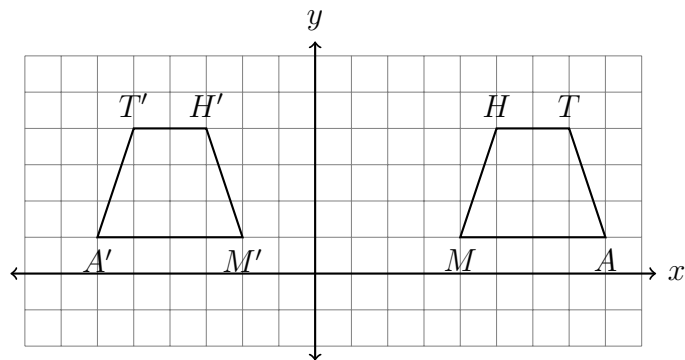
4. The quadrilateral $MATH$ is mapped to $M'A'T'H'$ by a rigid motion. What transformation a been applied?
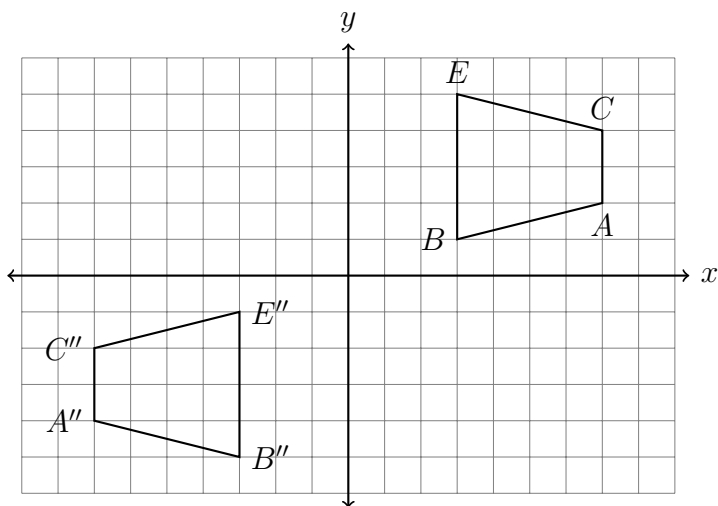
(a) Dilation

(b) Reflection

(c) Rotation

(d) Translation

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

6. Which of the following would map $\triangle DOG \to \triangle D'O'G'$?

T   F   Reflected across the y-axis

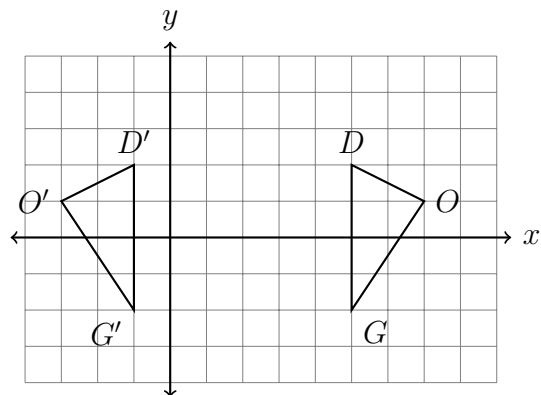T   F   Translated six to the left, down zero

T   F   Slid to the left four, then reflected across the y-axis
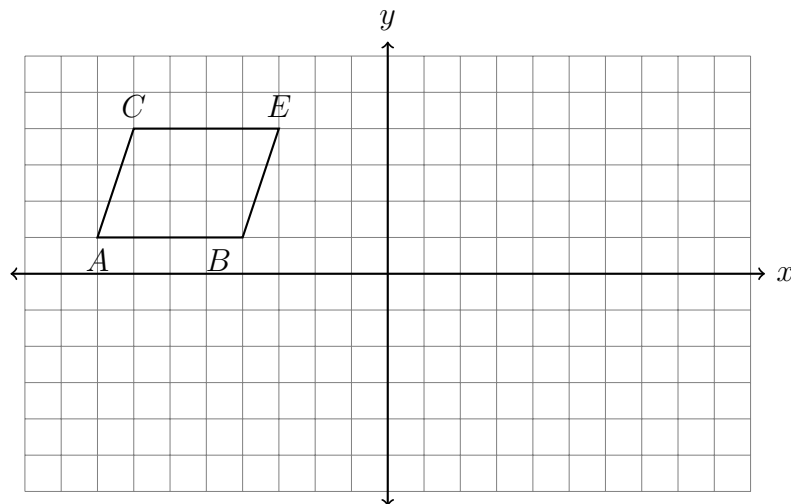
T   F $(x, y) \to (x - 6, y + 0)$

T   F   Rotated $90°$ clockwise around $(2, 0)$
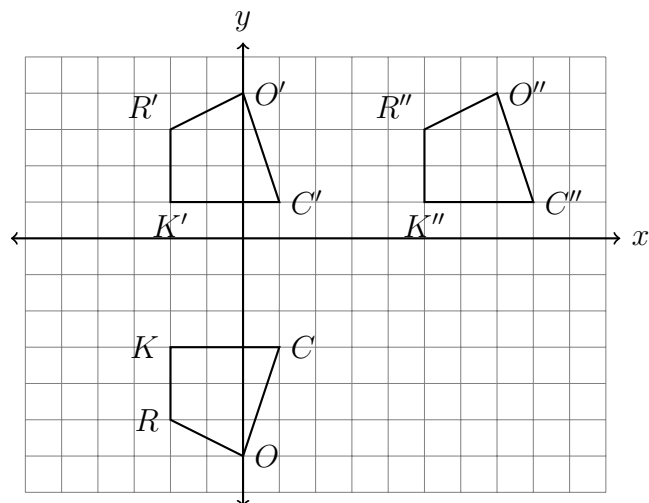
T   F   Reflected across the line $x = 2$

7. First reflect the trapezoid $BECA$ across the y-axis, then move it down 5 and left 1. Label the images $B'E'C'A'$ and $B''E''C''A''$.

8. The quadrilateral $ROCK$ undergoes rigid motions, shown below. Describe the sequence of transformations applied.

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