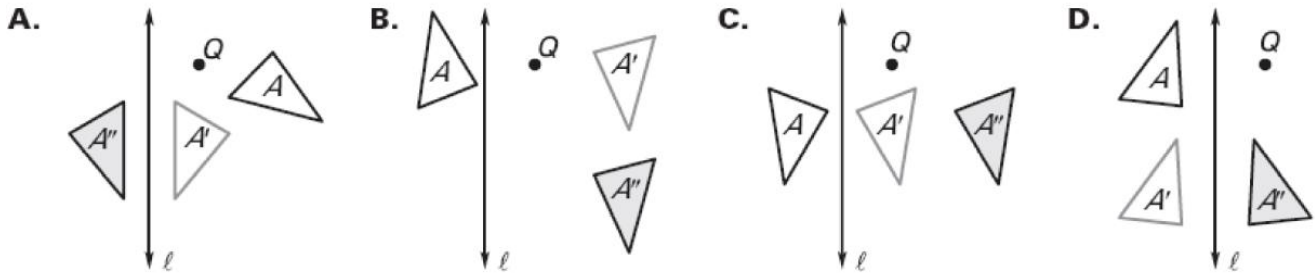


1.6.D2 - TRANSFORMATIONS

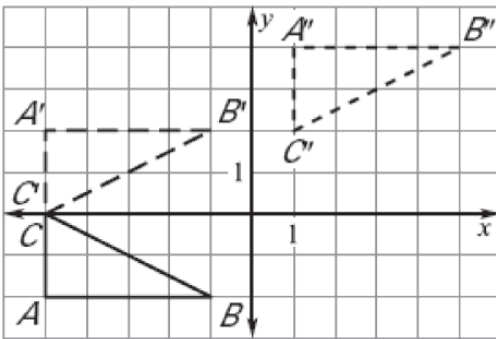
Match the composition with the diagram.



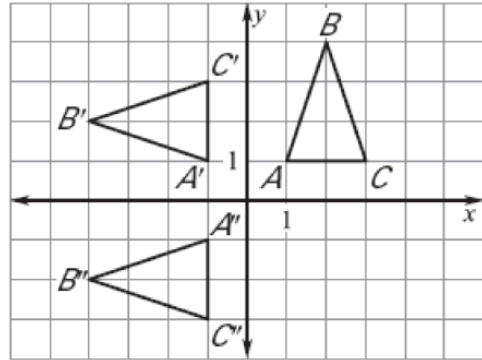
1. Translate parallel to ℓ , then reflect in ℓ
2. Rotate about Q , then reflect in ℓ
3. Rotate about Q , then translate parallel to ℓ
4. Reflect in ℓ , then translate perpendicular to ℓ

Describe the composition of transformations that maps $\triangle ABC$ to $\triangle A''B''C''$.

5.

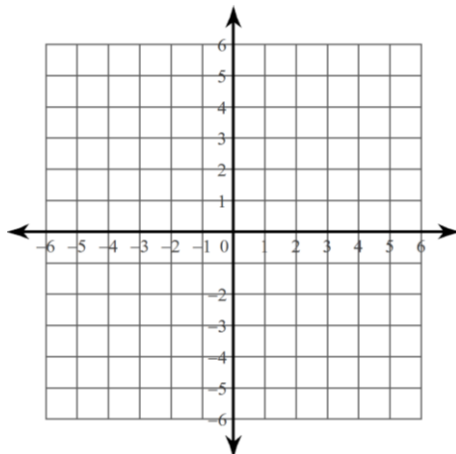


6.

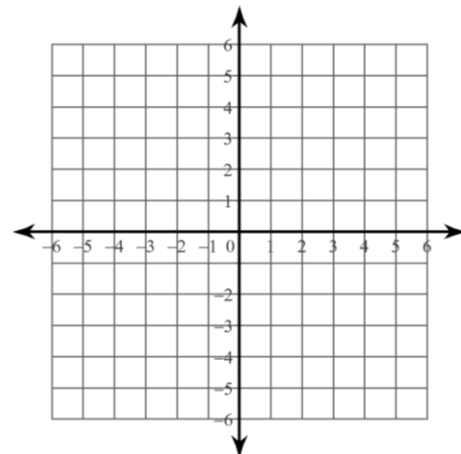


The vertices of $\triangle ABC$ are $A(2, 4)$, $B(6, 6)$, and $C(5, 2)$. Graph the image of $\triangle ABC$ after a composition of the transformations in the order they are listed. Label the vertices of the image accordingly.

7. Translation: $(x, y) \rightarrow (x - 4, y - 3)$
Reflection in the x -axis

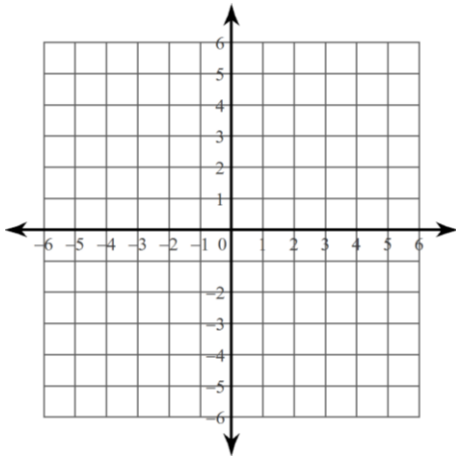


8. Translation: $(x, y) \rightarrow (x - 2, y + 1)$
Rotation: 90° counterclockwise

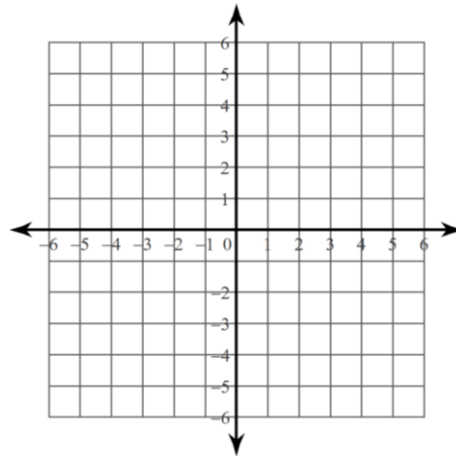


The vertices of $\triangle ABC$ are $A(3, 1)$, $B(1, 5)$, and $C(5, 3)$. Graph the image of $\triangle ABC$ after a composition of the transformations in the order they are listed. Label the vertices of the image accordingly.

9. Translation: $(x, y) \rightarrow (x + 1, y - 5)$
 Reflection in the y -axis

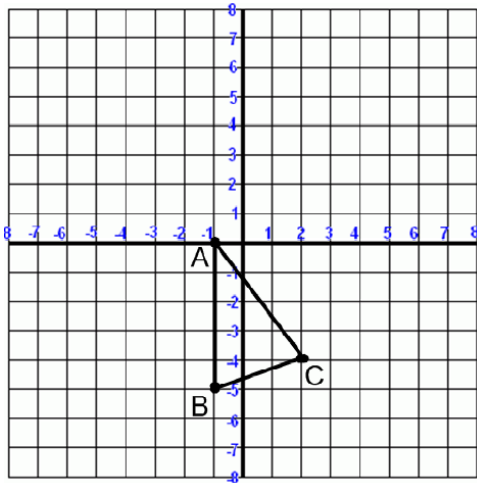


10. Translation: $(x, y) \rightarrow (x - 6, y + 1)$
 Rotation: 270° counterclockwise

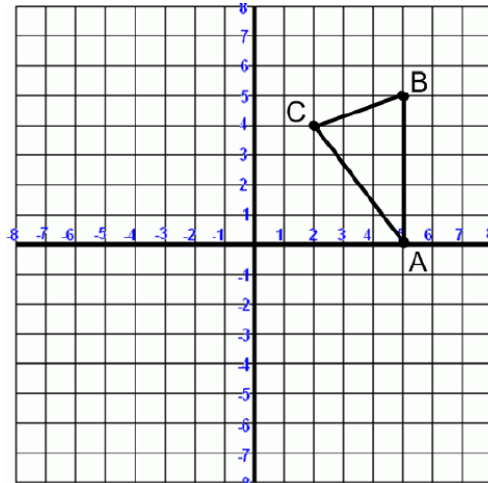


Draw the image of $\triangle ABC$ after each composition of transformations. Label the vertices of the image accordingly.

11. Translation: $(x, y) \rightarrow (x + 4, y + 2)$
 Reflection in the y -axis



12. Rotation: 90° counterclockwise
 Reflection in the x -axis



13. Rotation: 270° clockwise
 Translation: $(x, y) \rightarrow (x + 3, y - 5)$
 Reflection over the line $x = -2$

