

TODAY'S AGENDA: December 13th+

- Work on Khan Academy Mission:
- Complete Mission Foundation Skills
- Today's Objective: Whole-Group Lessons:
- Transformations - Reflections
- Standards:
- CCSS.MATH.CONTENT.HSG.CO.4:
- Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
- Continue With Your Mission Assignments

Types of Transformations

Rigid Transformations

1. Translation - move

2. Rotation - Spin

+ : counter-clockwise

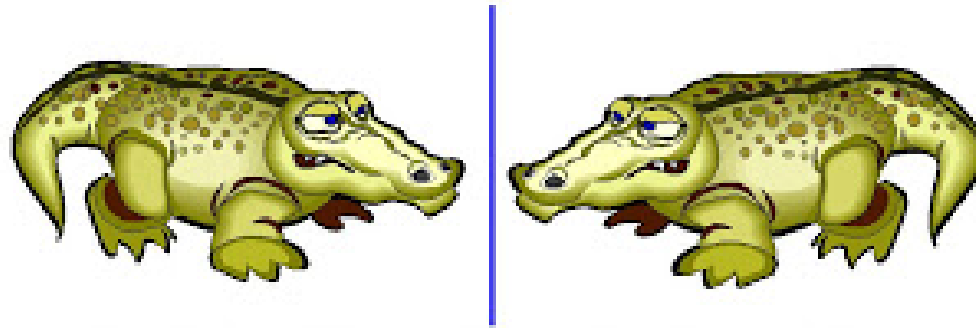
- : clockwise

3. Reflection - flip (mirror image, butterfly wing)

4. Dilation - Resize (bigger, smaller)
↳ Not Rigid

Reflections: Flipping Over a Line

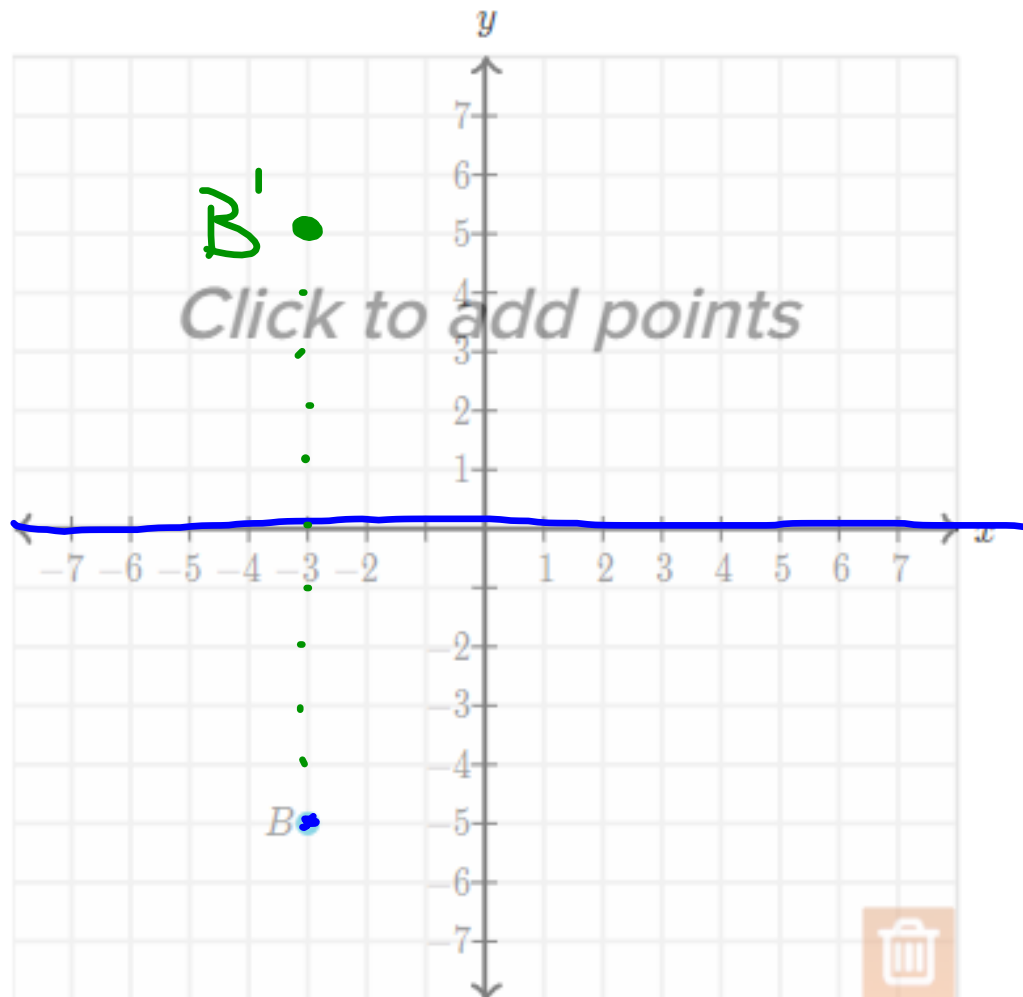
flip



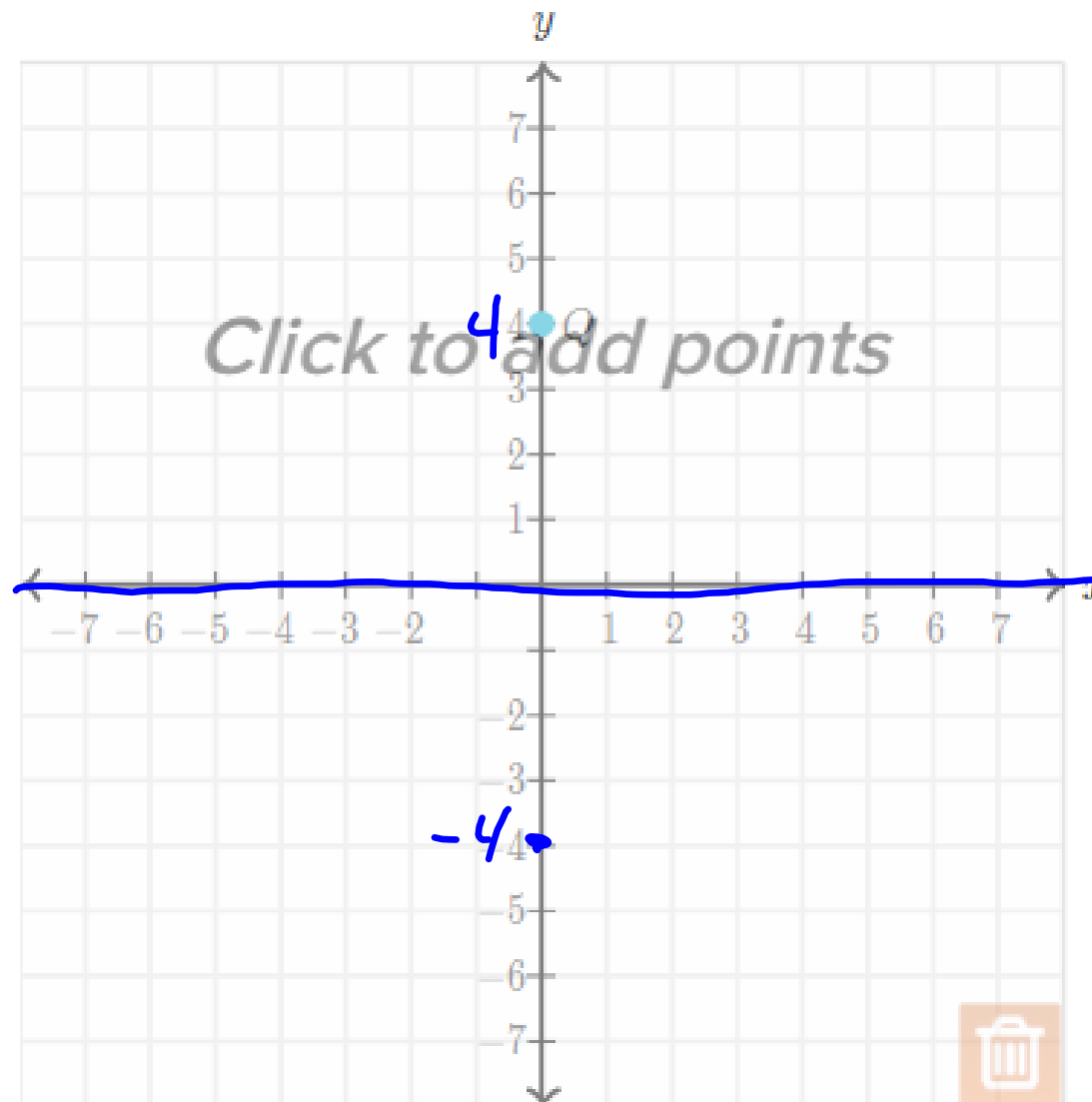
*to turn over
or reflect

Reflect Points

Plot the image of point B under a reflection across the x -axis.



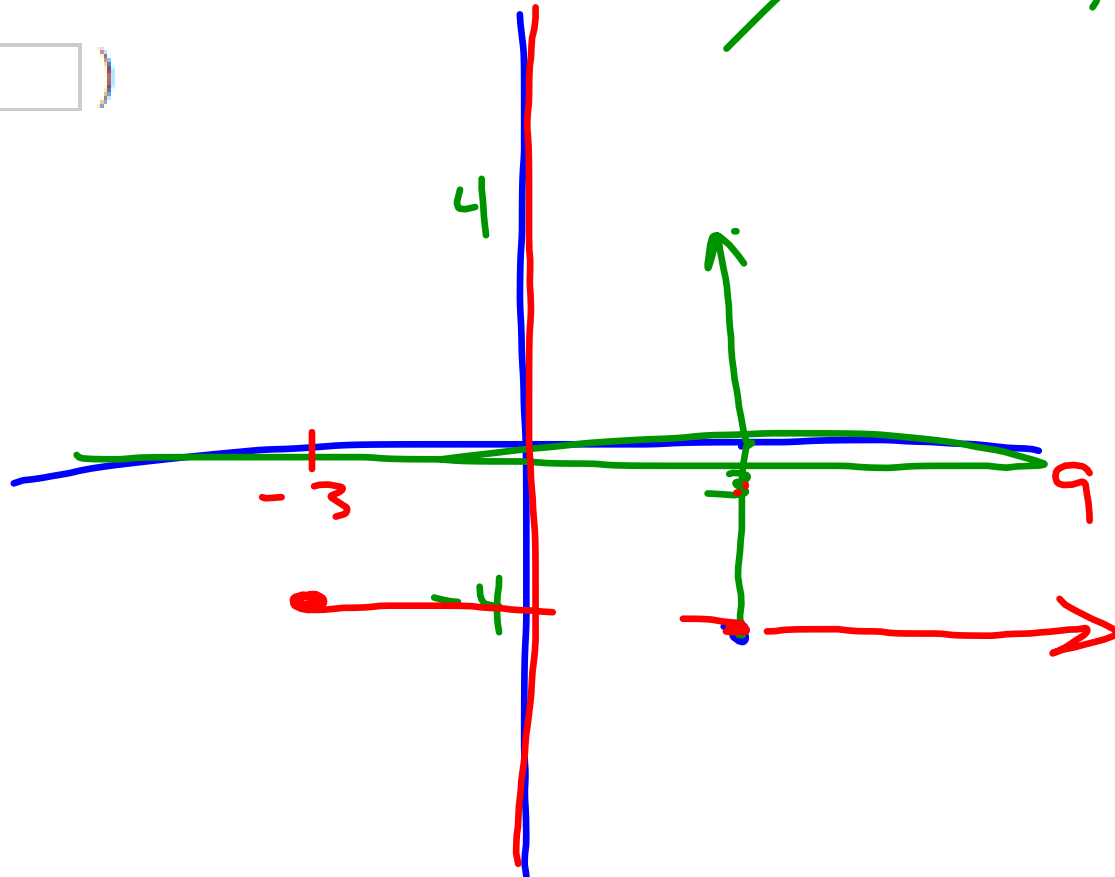
Plot the image of point Q under a reflection across the x -axis.



Point Q' is the image of $Q(3, -4)$ under a reflection across the x -axis.

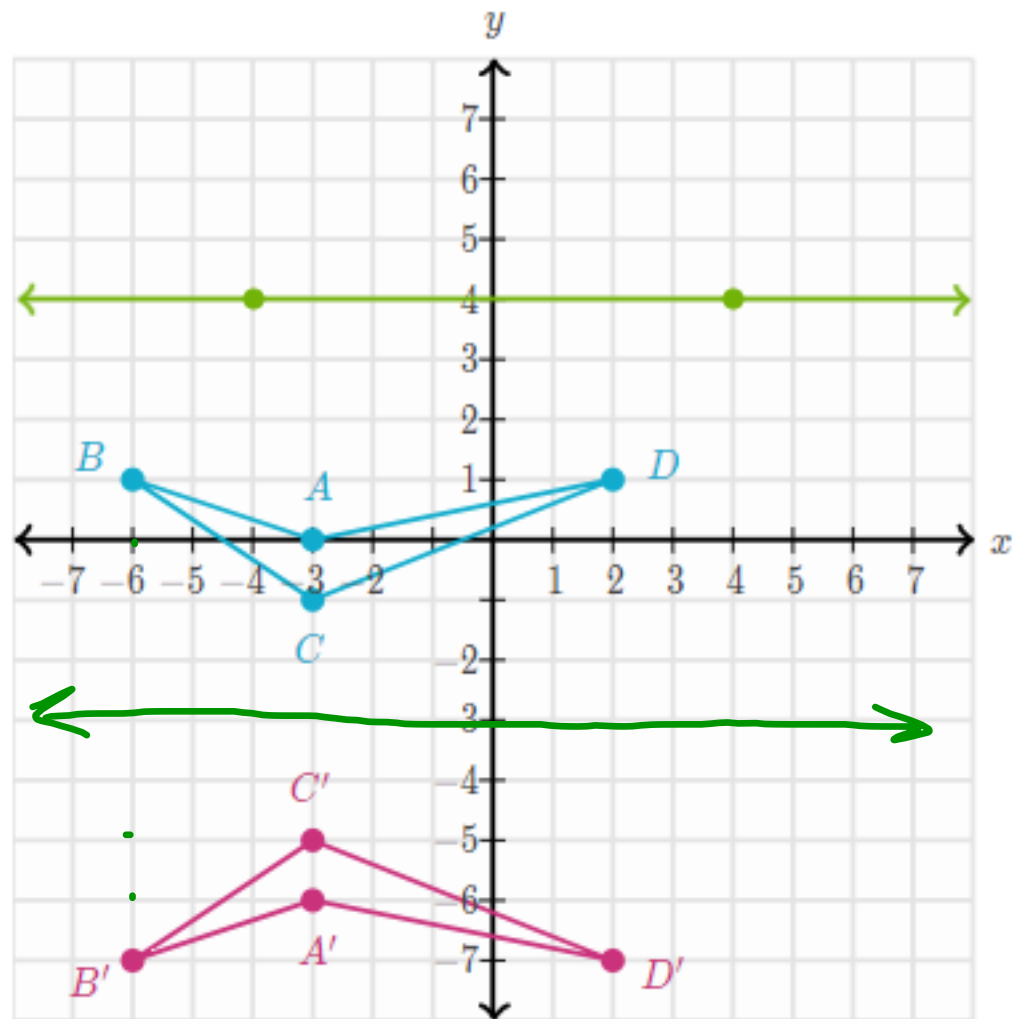
What are the coordinates of Q' ?

(,)

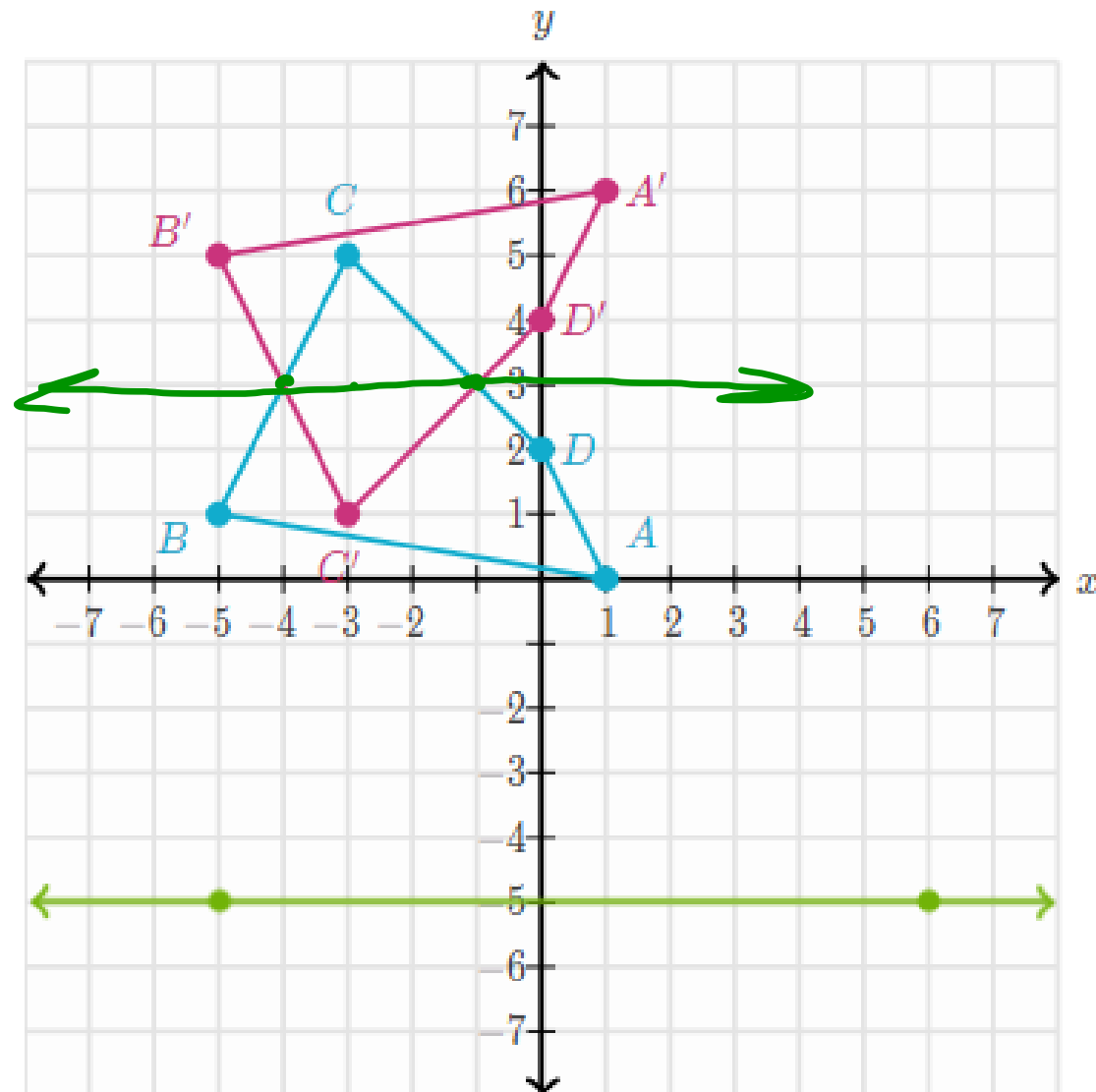


Determine Reflections

Draw the line of reflection that reflects quadrilateral $ABCD$ onto quadrilateral $A'B'C'D'$.

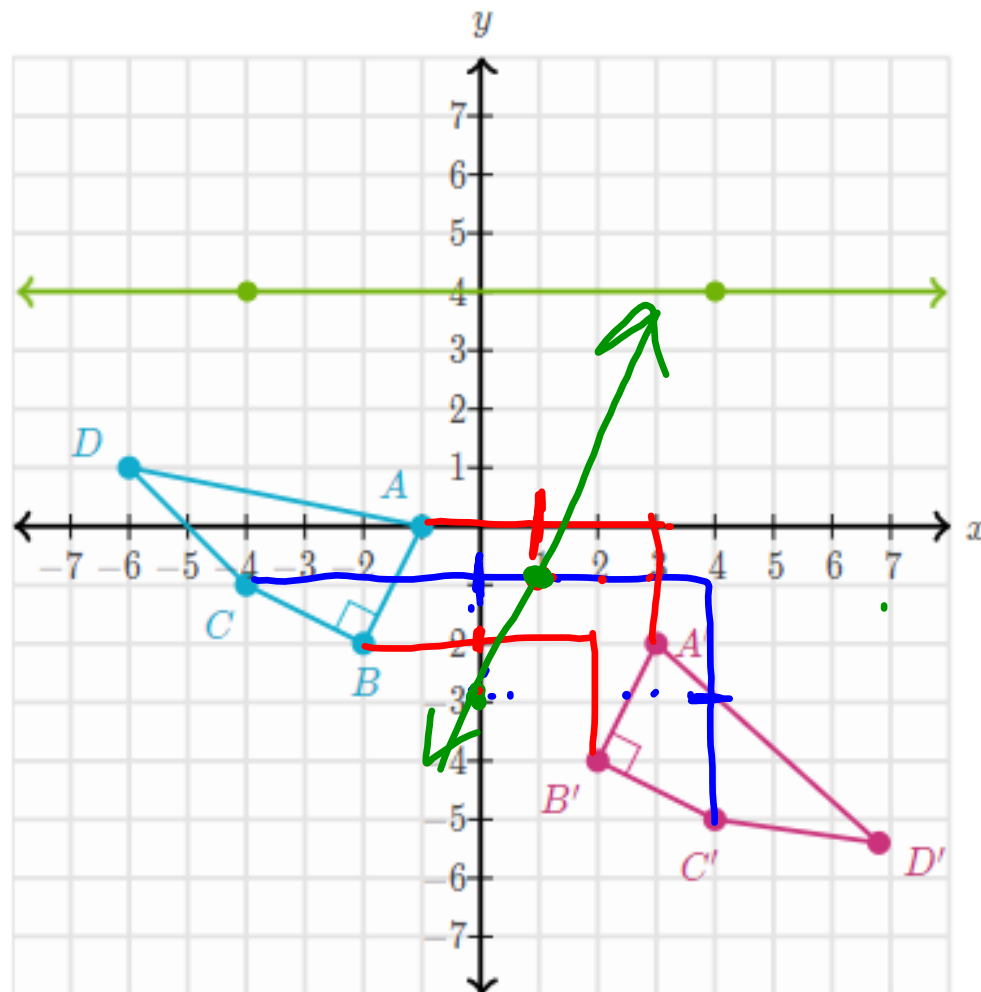


Draw the line of reflection that reflects quadrilateral $ABCD$ onto quadrilateral $A'B'C'D'$.



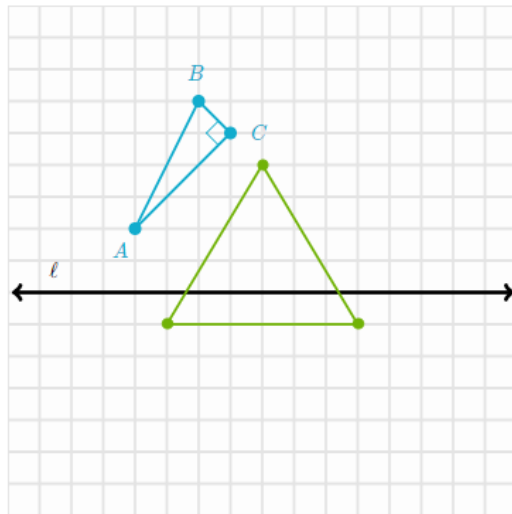
Determine Reflections (advanced)

Draw the line of reflection that reflects quadrilateral $ABCD$ onto quadrilateral $A'B'C'D'$.

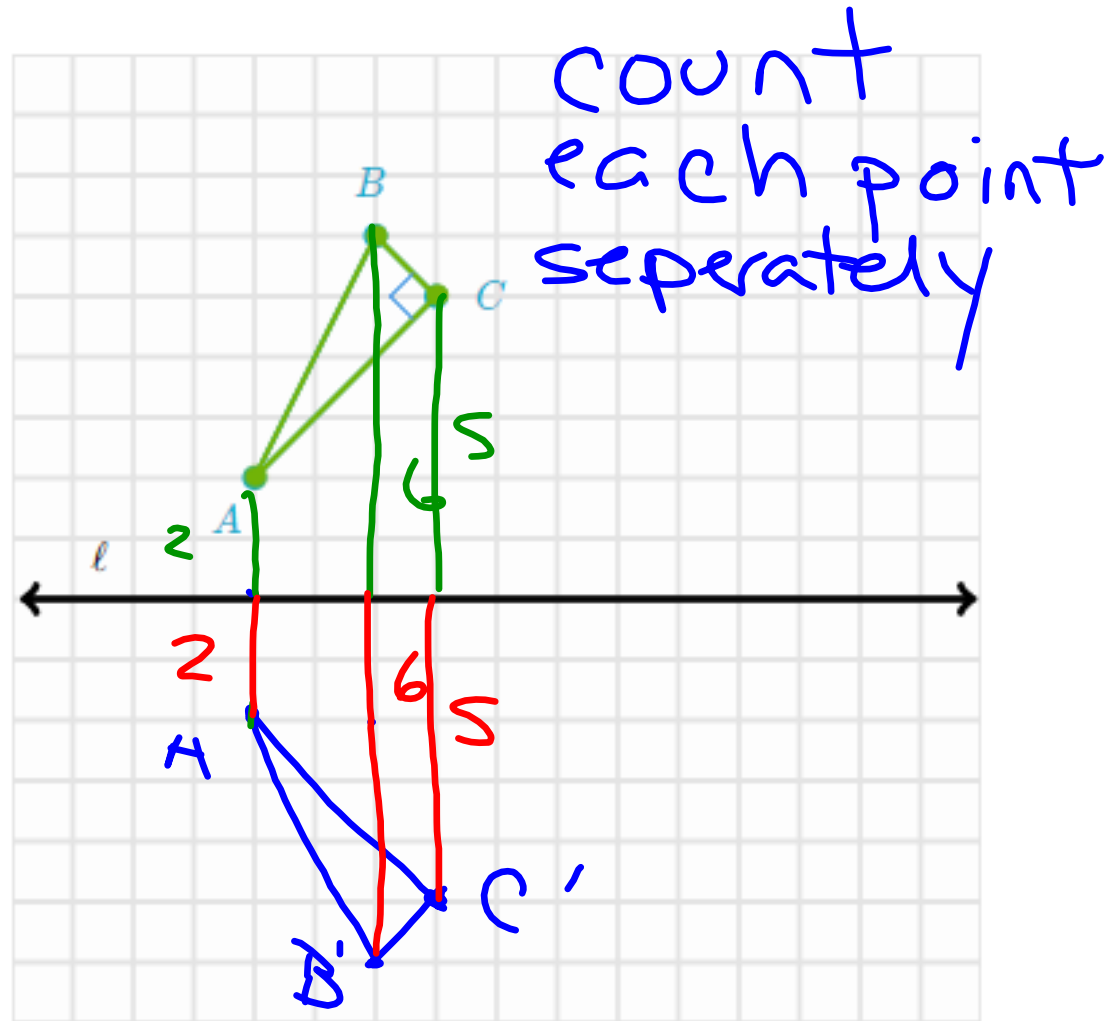


Reflect Shapes

Plot the image of triangle $\triangle ABC$ under a reflection across line ℓ .



Plot the image of triangle $\triangle ABC$ under a reflection across line ℓ .



Skills You Should Be Working on:

1. Identify Transformations
2. Translate Points
3. Determine Translations
4. Translate Shapes
5. Rotate Points
6. Determine Rotations
7. Rotate Shapes
8. Reflect Points
9. Determine Reflections
10. Determine Reflections (advanced)
11. Reflect Shapes