

TRANSLATION: Move along a vector

Name: _____

Math 7.1, Period 1 and 2

Mr. Rogove

REFLECTION: Mirror image across a line

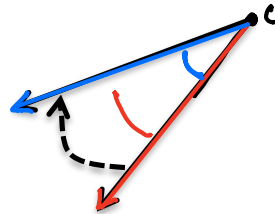
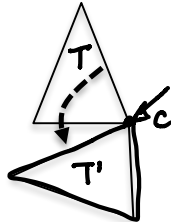
Date: _____

LEARNING OBJECTIVE: We will perform rotations on the coordinate plane. (G8M2L3)

CONCEPT DEVELOPMENT

Rotation: A rotation turns a point, line, object, etc around a center point.

Examples:

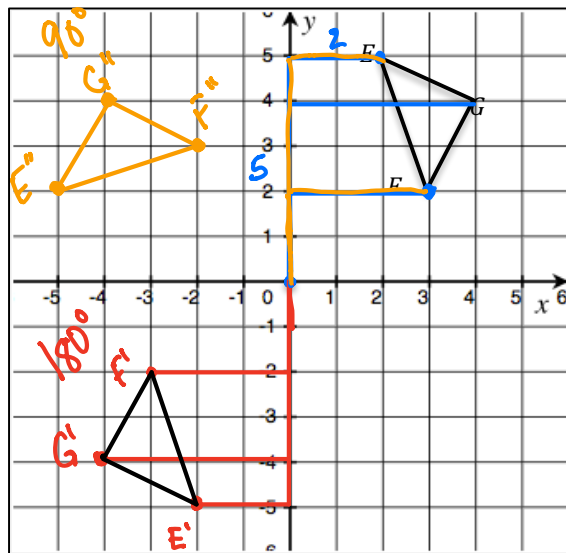


- Rotations also map lines to lines, segments to segments, rays to rays, and angles to angles.
- Lengths of segments are preserved and degrees of measure of angles are preserved.
- A rotation of positive degrees moves counterclockwise around a center, and a rotation of negative degrees move clockwise around a center.

When you perform a rotation, you need a center of rotation, a measurement of rotation (i.e. 90 or 180 degrees), AND a direction (counterclockwise or clockwise).

Example:

Let's rotate 180°, and 90° clockwise.



- ① Center of rotation
- ② degree

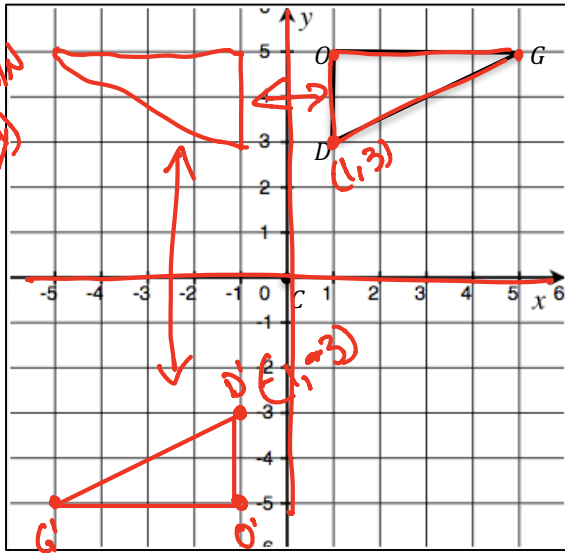
180 rotations create parallel lines...unless point of rotation is ON the rotated line, then it's a collinear line.

GUIDED PRACTICE

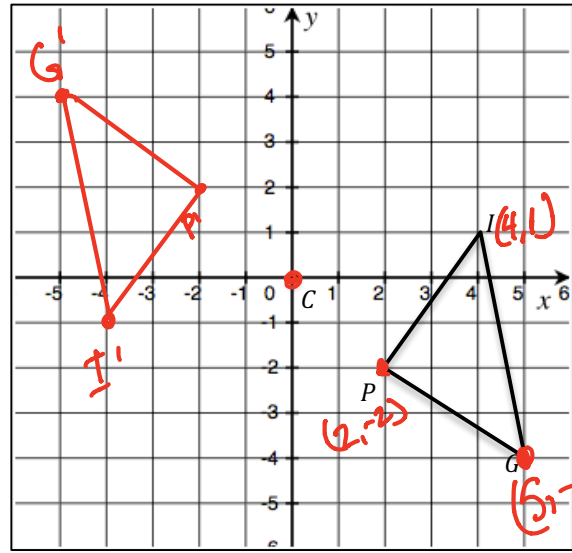
Steps for Rotating Objects on a Coordinate Plane

1. Identify the center of rotation, the direction and the degree of rotation.
2. Draw an "elbow" from a point on the object to the center of rotation.
3. Rotate the elbow from the center of rotation based on instructions.
4. Repeat steps 2 and 3 with all other points.
5. Connect all dots and label the points of your rotated object.

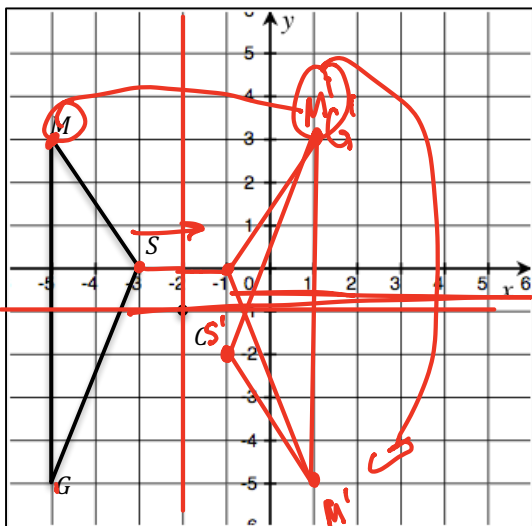
Rotate the object around the center C by 180 degrees.



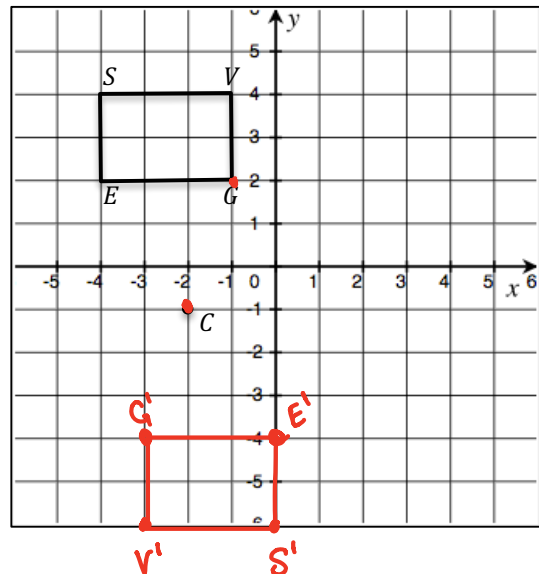
Rotate the object around the center C by 180 degrees.



Rotate the object around the center C by 180 degrees.

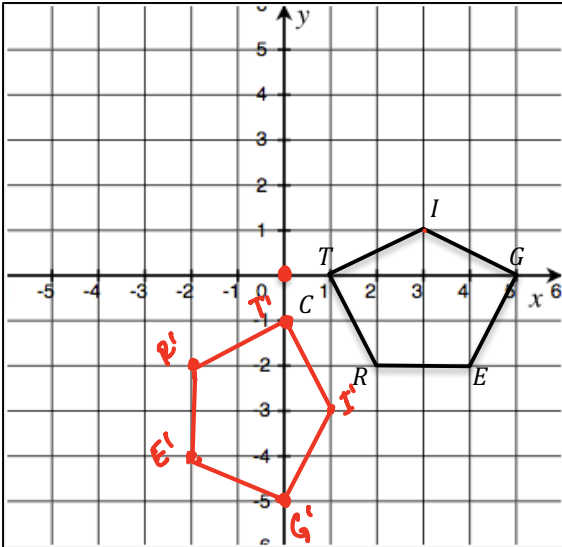


Rotate the object around the center C by 180 degrees.

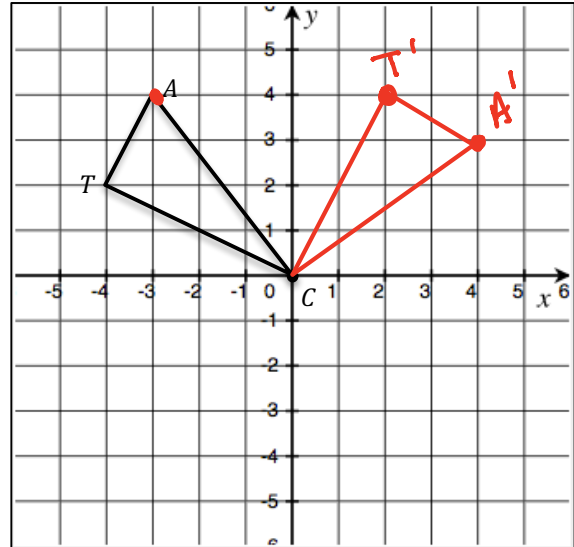


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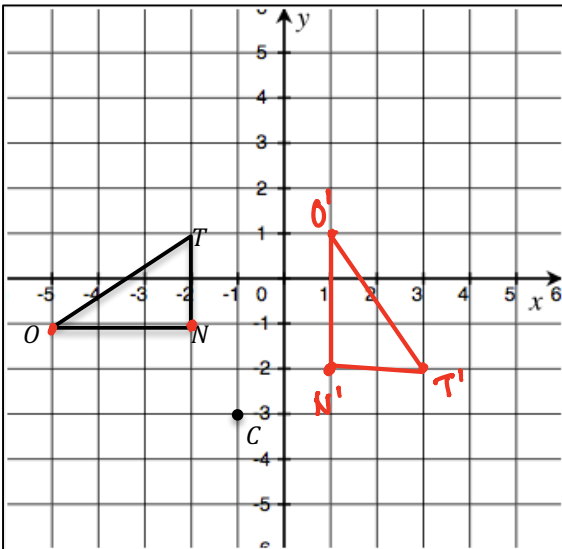
Rotate the object 90 degrees clockwise around center C.



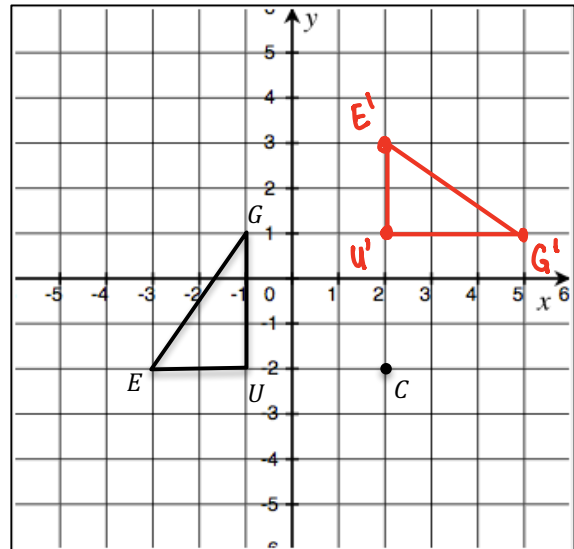
Rotate the object 90 degrees clockwise around center C.



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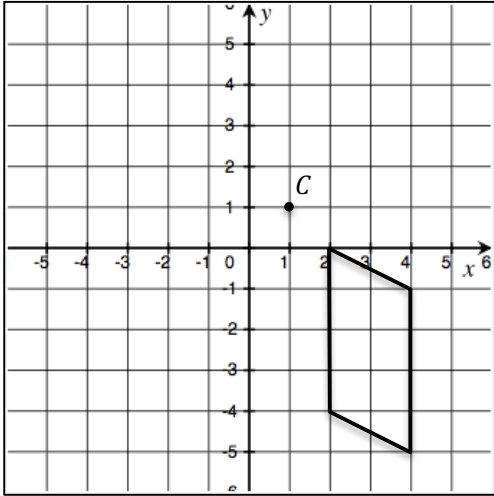
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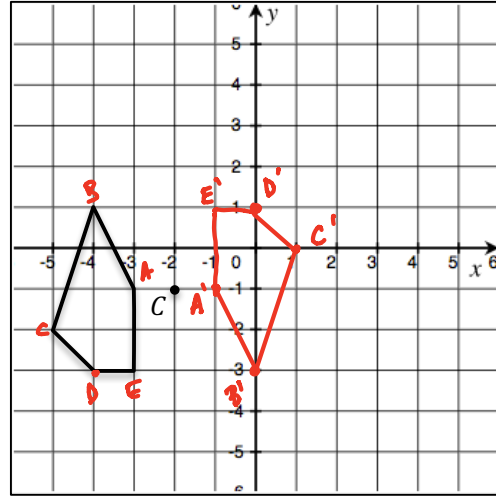
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INDEPENDENT PRACTICE

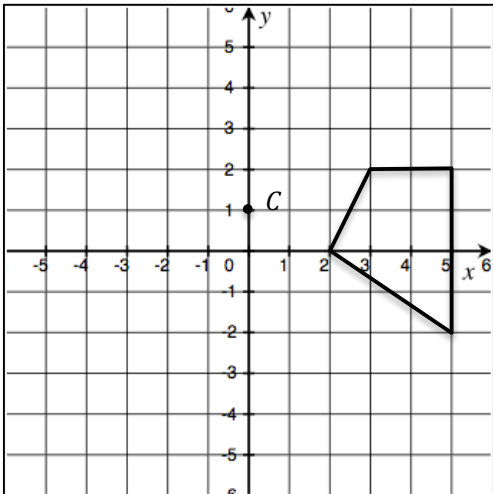
Rotate the object around center C 90 degrees clockwise.



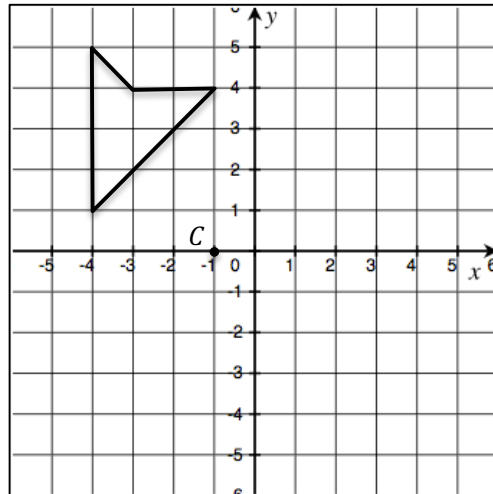
Rotate the object around center C 180 degrees.



Rotate around center C 90 degrees counter clockwise



Rotate 270 degrees counterclockwise around center C.



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CLOSURE

Give out quiz from last year on moving point based on 7 different things.

NOTES