

Geometry CC - Unit 4
 Lesson 3: Rotations
 M1 L13 Day 1
 Homework: HW Handout 4.3

HW Answers 4.2 Day 2

Example 4:
 Name the coordinates of the vertices of the image after the given rotation and then graph the image. You do not have to use any tools to complete this process.

Rot: CCW
 90° clockwise about the origin

| Preimage | Image |
|----------|-----------|
| Q(1, 1) | Q'(1, -1) |
| R(4, 5) | R'(5, -4) |
| S(5, 2) | S'(2, -5) |

Example 5:
 Name the coordinates of the vertices of the image after the given rotation and then graph the image. You do not have to use any tools to complete this process.

same as 370° CW
 90° counterclockwise about the origin

| Preimage | Image |
|-----------|-----------|
| A(-4, 0) | A'(0, -4) |
| B(-2, -2) | B'(2, -2) |
| C(-3, -6) | C'(6, -3) |

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Example 6:
 Name the coordinates of the vertices of the image after the given rotation and then graph the image. You do not have to use any tools to complete this process.

180° clockwise about the origin

| Preimage | Image |
|-----------|------------|
| W(-3, -3) | W'(3, 3) |
| X(3, -4) | X'(-3, 4) |
| Y(4, 1) | Y'(-4, -1) |
| Z(-5, 4) | Z'(5, -4) |

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Finding the Center of Rotation

a. Draw a segment connecting points A and A' .

b. Using a compass and straightedge, find the perpendicular bisector of this segment.

c. Draw a segment connecting points B and B' .

d. Find the perpendicular bisector of this segment.

e. The point of intersection of the two perpendicular bisectors is the center of rotation. Label this point P .

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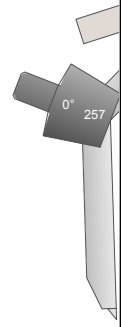
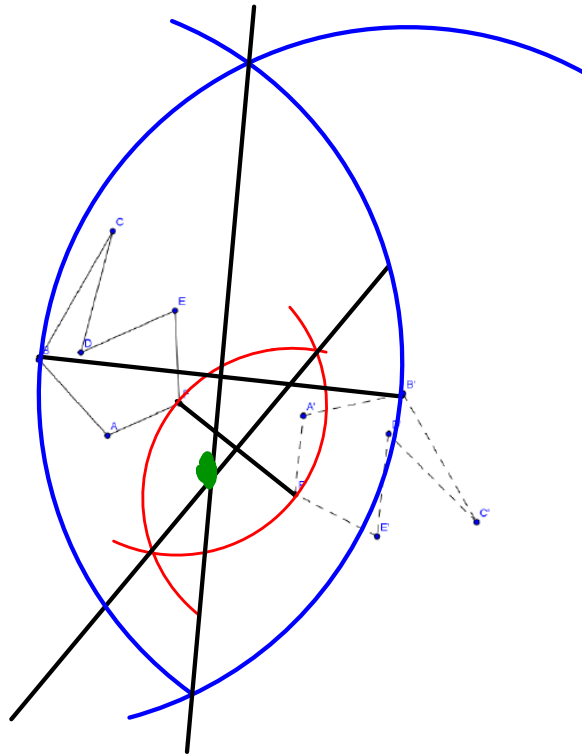
Example 1:

Find the center of rotation.

Center of rotation

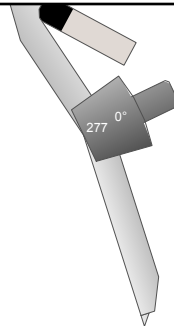
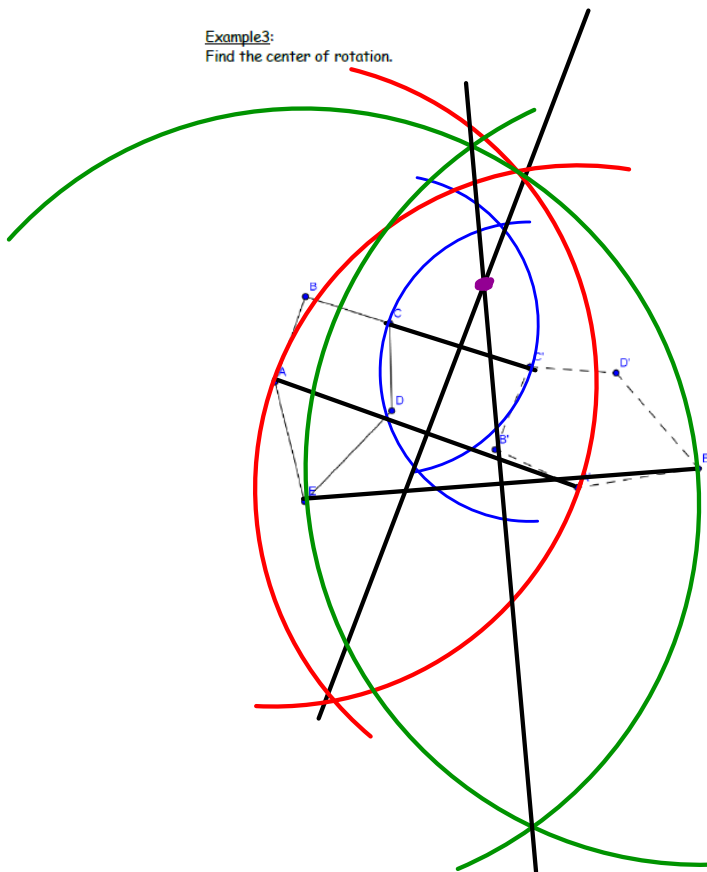
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Example 2:
Find the center of rotation.



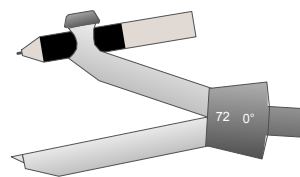
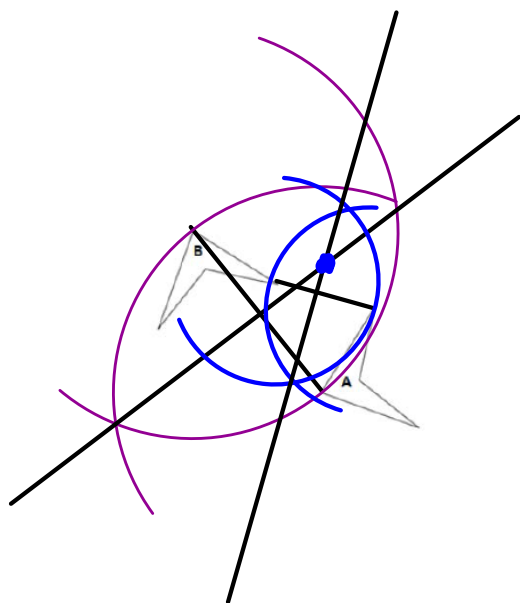
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Example3:
Find the center of rotation.



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Example 4:
Find the center of rotation for the transformation below that carries A onto B.



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