

Name: _____

Block: _____

Rotations Practice

90° CCW Rotation about the origin:

$$R_{90}(x, y) \rightarrow (-y, x)$$

180° CCW Rotation about the origin:

$$R_{180}(x, y) \rightarrow (-x, -y)$$

270° CCW Rotation about the origin:

$$R_{270}(x, y) \rightarrow (y, -x)$$

1. Rotate the preimage about the origin 270 degrees **CW**.

A(-2,4) → A' _____

B(0,-8) → B' _____

C(-3,5) → C' _____

2. Rotate the preimage about the origin 90 degrees **CW**.

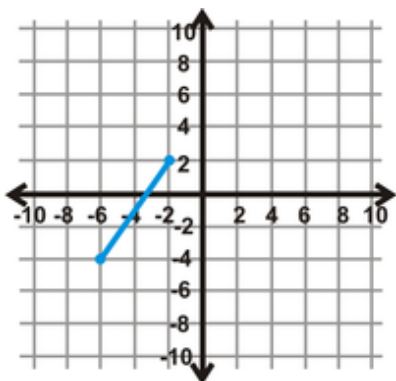
D(1,2) → D' _____

E(-3,-5) → E' _____

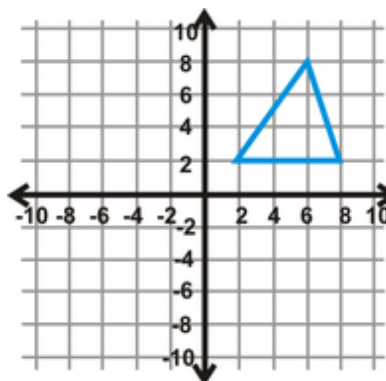
F(4,-1) → F' _____

Rotate each figure about the origin using the given **clockwise** angle.

3. 270°



4. 180°



5. Rotate the preimage about the origin 180 degrees **CCW**.

G(5,-29) → G' _____

H(20,-19) → H' _____

I(21,-4) → I' _____

6. Rotate the preimage about the origin 270 degrees **CCW**.

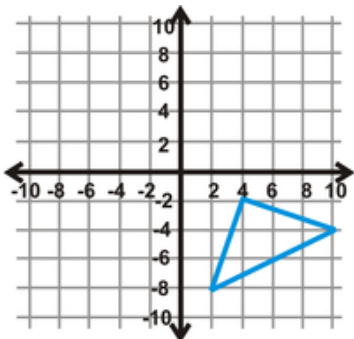
G(2,18) → G' _____

H(13,29) → H' _____

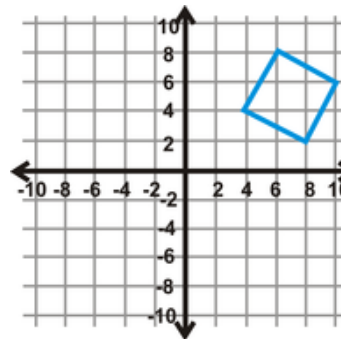
I(24,37) → I' _____

Rotate each figure about the origin using the given **counterclockwise** angle.

7. 180°

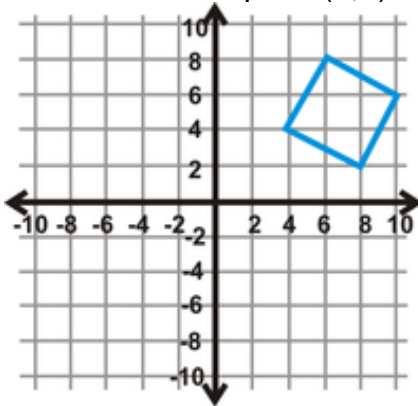


8. 90°

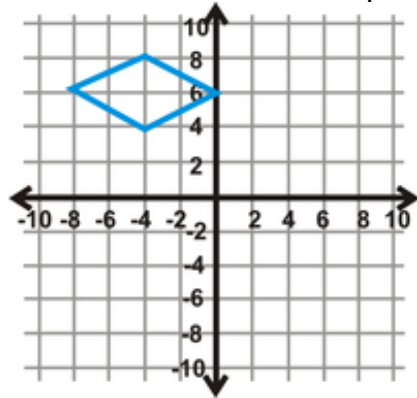


Rotations about a point.

9. 90° clockwise about the point $(2,0)$

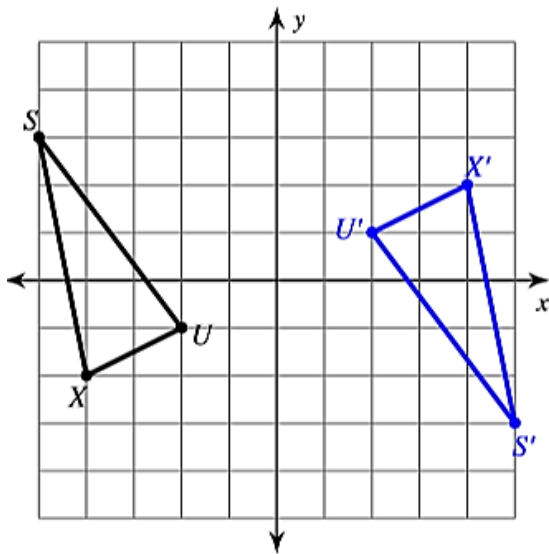


10. 90° counterclockwise about the point $(6,0)$

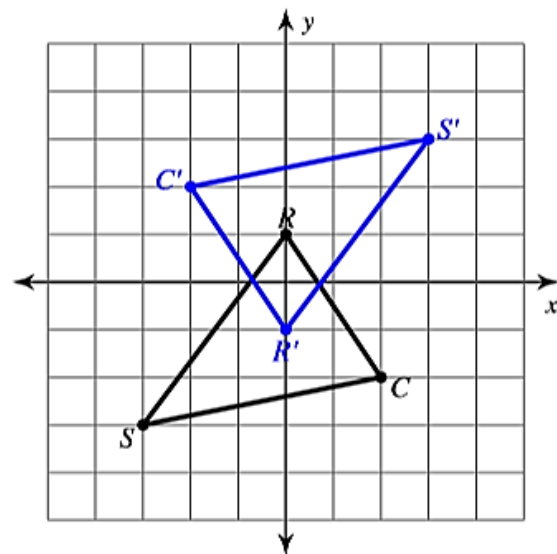


Write a rule that describe each transformation.

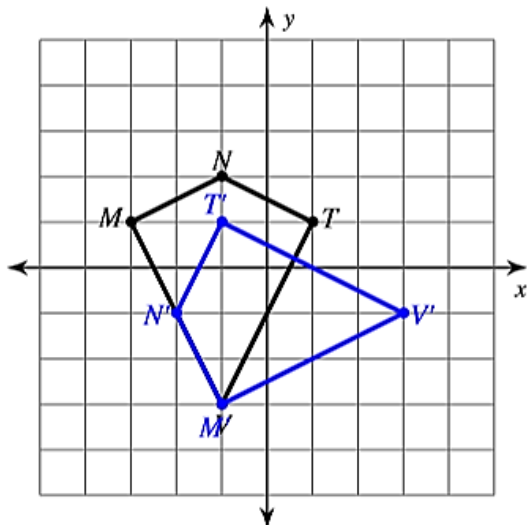
11.



12.



13.



14.

