Name_____

Unit 10.4 worksheet Rotations

Period____

Write a rule to describe each transformation.

1) $F(-2, -5)$, $E(-4, -1)$, $D(-3, 1)$, $C(0, 0)$
       to
  $F'(5, -2)$, $E'(1, -4)$, $D'(-1, -3)$, $C'(0, 0)$

    rotation 90° counterclockwise about the origin

2) $H(-2, -3)$, $I(-4, 1)$, $J(1, 2)$, $K(2, -2)$
       to
  $H'(3, -2)$, $I'(-1, -4)$, $J'(-2, 1)$, $K'(2, 2)$

    rotation 90° counterclockwise about the origin

3) $A(-2, -5)$, $B(-3, -1)$, $C(1, -4)$
       to
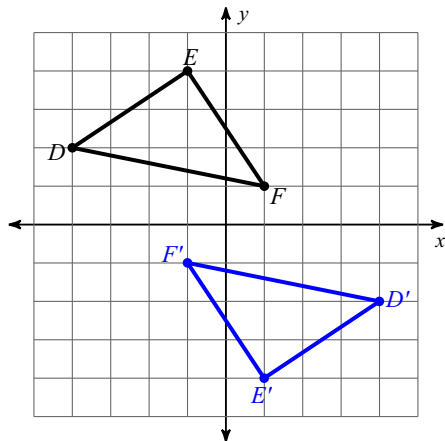 $A'(-5, 2)$, $B'(-1, 3)$, $C'(-4, -1)$

    rotation 90° clockwise about the origin

4) $F(4, 1)$, $E(4, 5)$, $D(5, 5)$, $C(5, 2)$
       to
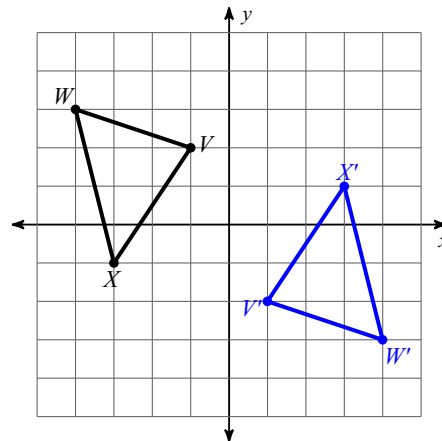 $F'(-1, 4)$, $E'(-5, 4)$, $D'(-5, 5)$, $C'(-2, 5)$

    rotation 90° counterclockwise about the origin
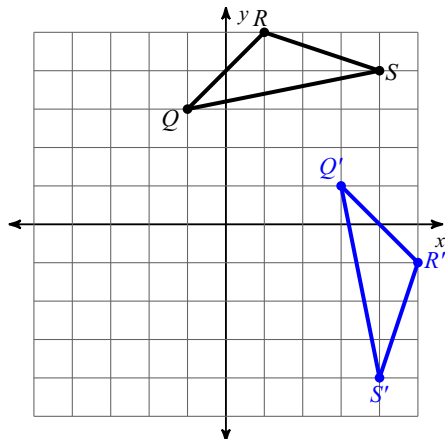
5)

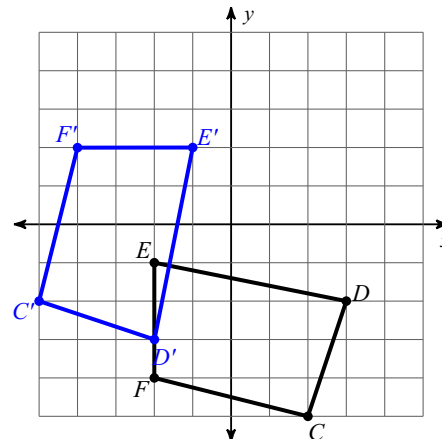rotation 180° about the origin

6)

rotation 180° about the origin

7)

rotation 90° clockwise about the origin
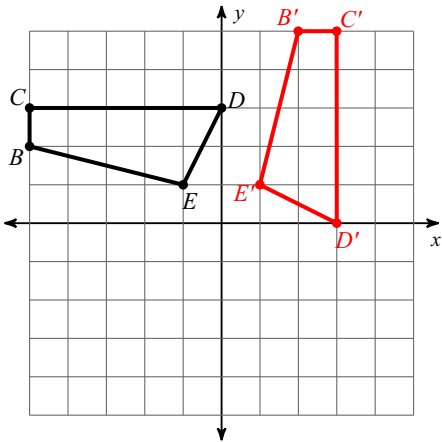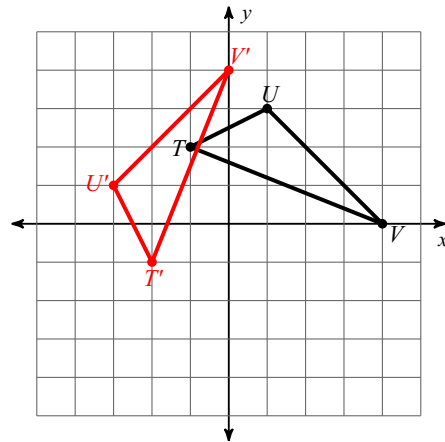
8)

rotation 90° clockwise about the origin

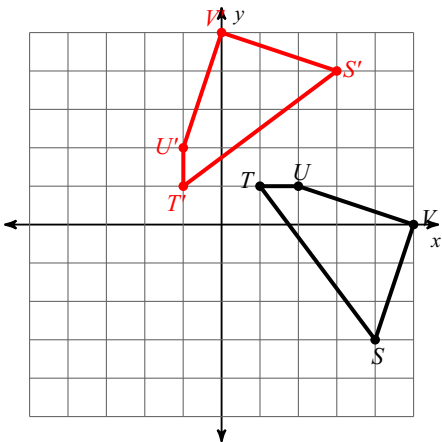**Graph the image of the figure using the transformation given.**
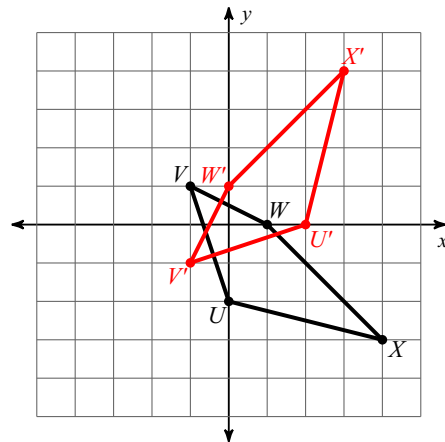
9) rotation 90° clockwise about the origin

10) rotation 90° counterclockwise about the origin

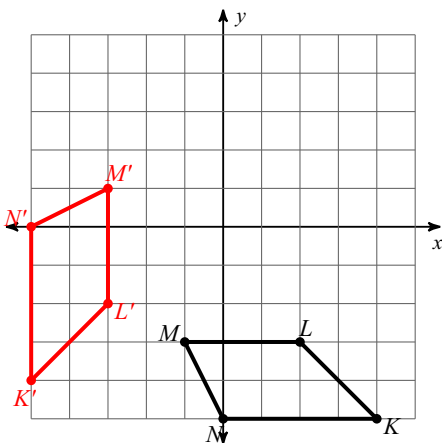11) rotation 90° counterclockwise about the origin

12) rotation 90° counterclockwise about the origin

13) rotation 90° clockwise about the origin

14) rotation 180° about the origin