

Unit 9.3 Rotations PRACTICE

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  $90^\circ$  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  $90^\circ$  counterclockwise about the origin

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

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

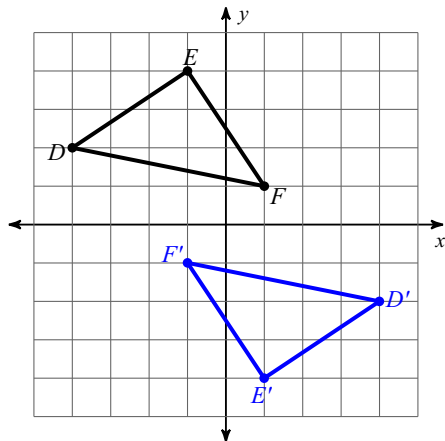
rotation  $90^\circ$  clockwise about the origin

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

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

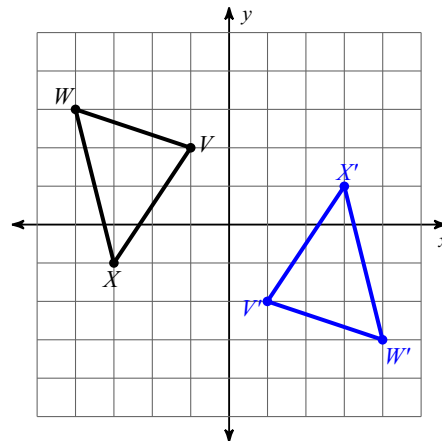
rotation  $90^\circ$  counterclockwise about the origin

5)



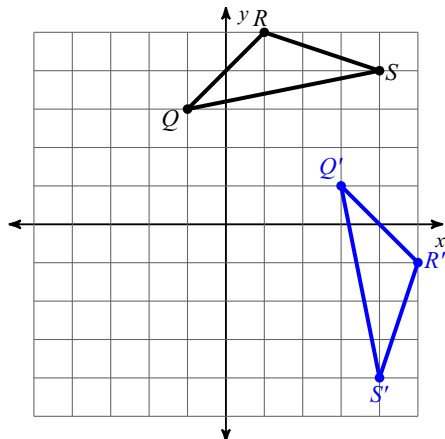
rotation  $180^\circ$  about the origin

6)



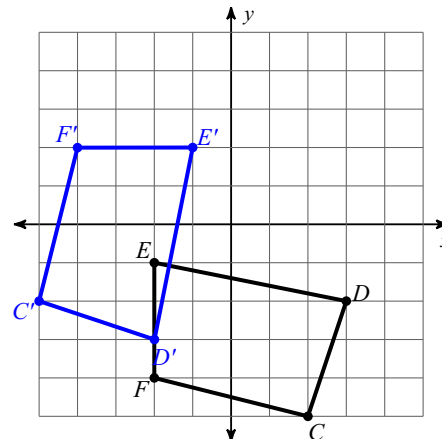
rotation  $180^\circ$  about the origin

7)



rotation  $90^\circ$  clockwise about the origin

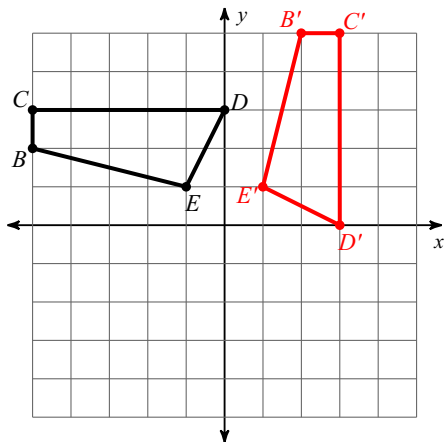
8)



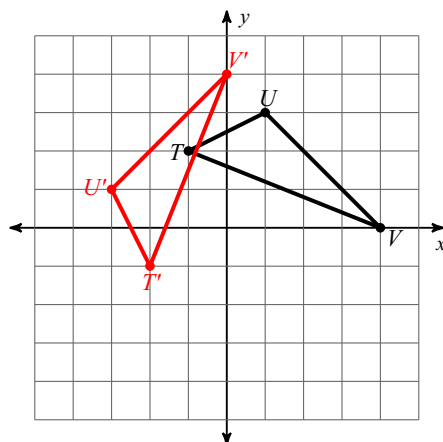
rotation  $90^\circ$  clockwise about the origin

**Graph the image of the figure using the transformation given.**

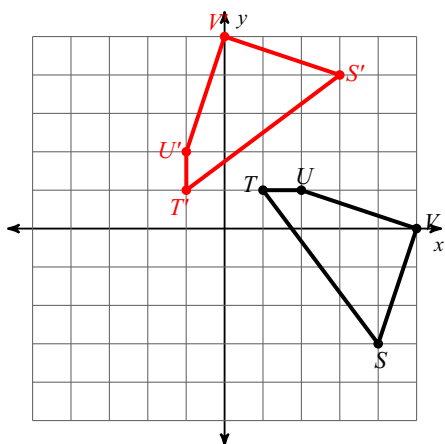
9) rotation  $90^\circ$  clockwise about the origin



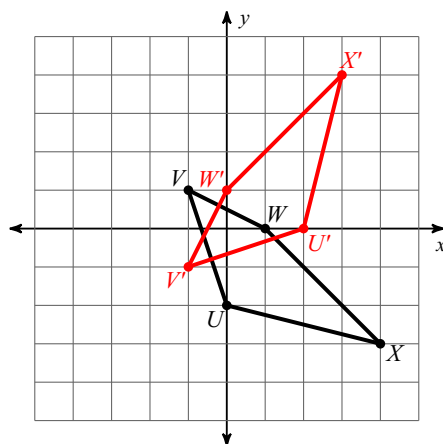
10) rotation  $90^\circ$  counterclockwise about the origin



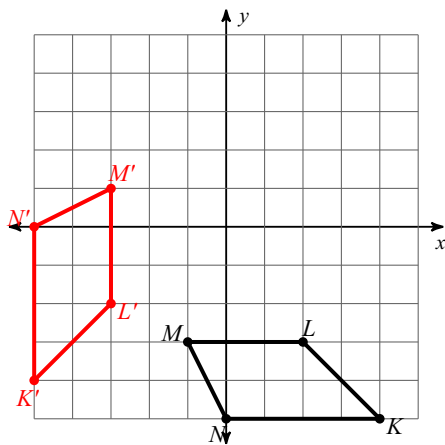
11) rotation  $90^\circ$  counterclockwise about the origin



12) rotation  $90^\circ$  counterclockwise about the origin



13) rotation  $90^\circ$  clockwise about the origin



14) rotation  $180^\circ$  about the origin

