Directions: Explain algebraically how to complete the rotation.

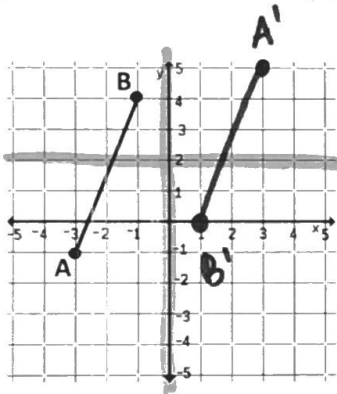1) A line segment TP is rotated 90° CCW about the fixed point of J(3, −2).

$$(x, y) \rightarrow (x-3, y+2) \rightarrow (-y, x) \rightarrow (x+3, y-2)$$

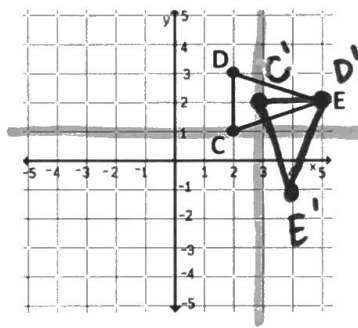2) A triangle HUG is rotated 180° CW about the fixed point K(−5, 0).

$$(x, y) \rightarrow (x+5, y) \rightarrow (-x, -y) \rightarrow (x-5, y)$$
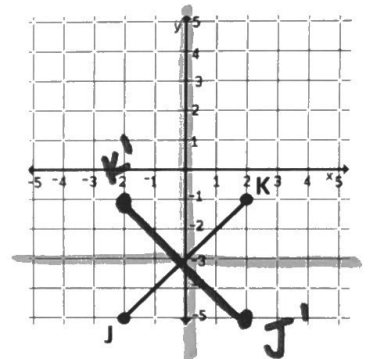
Directions: Complete the rotation.
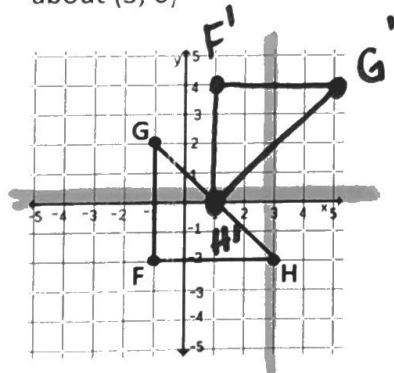
3) Rotate $\overline{AB}$ 180° about (0, 2)
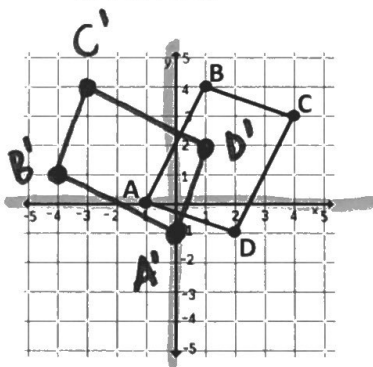

4) Rotate ΔCDE 90° CW about (3, 1)
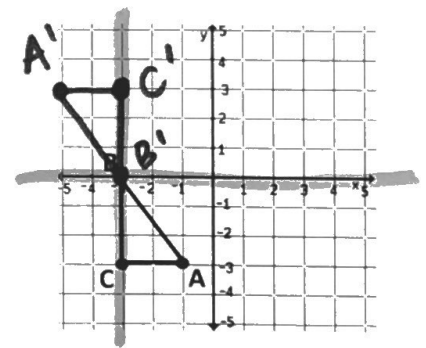

5) Rotate $\overline{JK}$ 270° CW about (0, −3)

6) Rotate ΔFGH by 270° CCW about (3, 0)

7) Rotate ABCD by 90° CCW. about (0, 0)

8) Rotate ΔABC 180° CW about Point B

Directions: Find the specified image coordinate.

9) If A(4, 10) is rotated 90° CCW about M(3, −1), what is A'?

$$A'(-8, 0)$$

10) If L(−2, −2) is rotated 180° CW about W(0, 6), what is L'?

$$L'(2, 14)$$