Quiz Review!
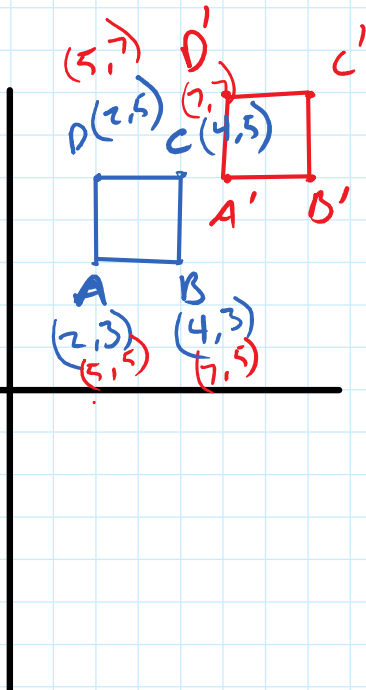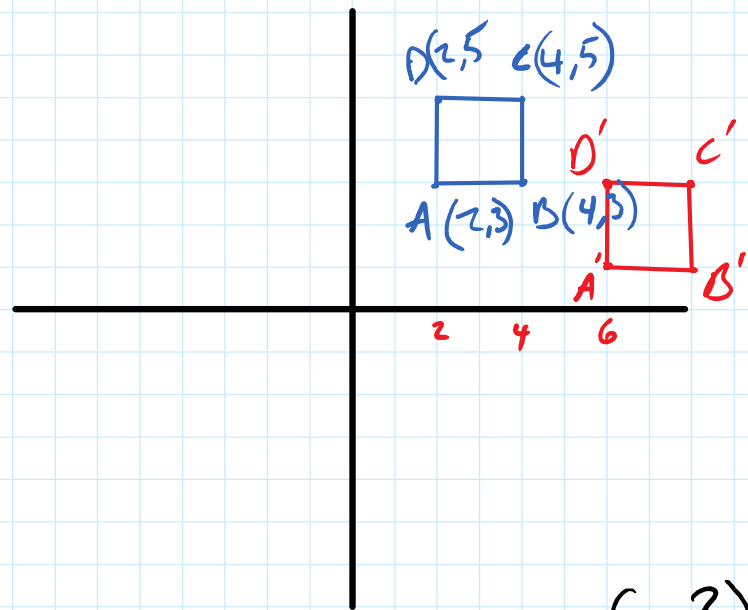
Graph the quadrilateral ABCD with vertices A(2, 3), B(4, 3), C(4, 5), D(2, 5), and its image after the translation.

⟨3,2⟩

(5,7)   D'   C'
D(2,5) (7,7)
        C(4,5)
              A'   B'

        A   B
       (2,3)   (4,3)
       (5,5)   (7,5)

⟨4,−2⟩

D(2,5   C(4,5)

            D'   C'
A(2,3) B(4,3)
              A'   B'
    2   4   6

(,)

Find the component form of the vector that translates P(3, 7) to P'.
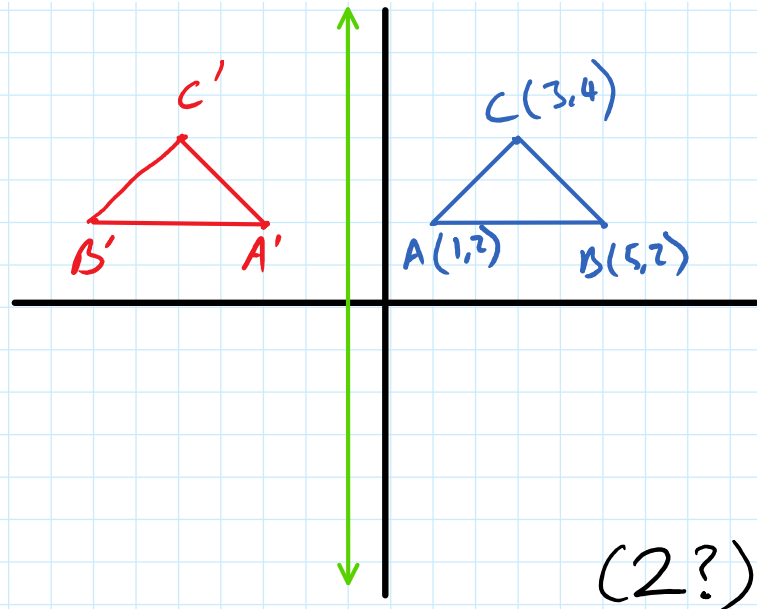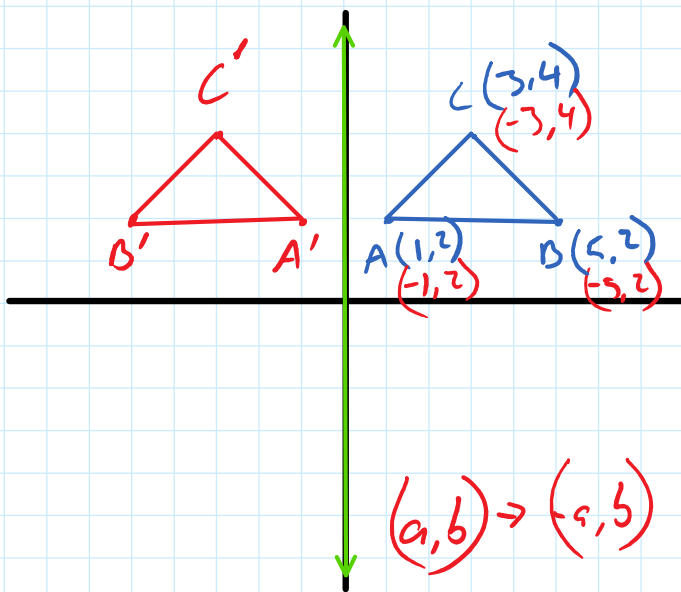
(3, 7)
⟨-2, -1⟩

P'(1, 6)

(3, 7)
⟨5, -8⟩

P'(8, -1)

Graph the polygon with the given vertices and its image after a reflection in the given line.
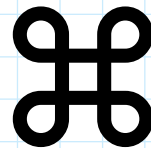
A(1, 2), B(5, 2), C(3, 4); y-axis

R(0,0), S(3, 4), T(0, 8); X=-1

C' $C(3,4)$ $(-3,4)$

B' A' $A(1,2)$ $(-1,2)$ $B(5,2)$ $(-5,2)$

$(a,b) \rightarrow (-a,b)$

c' $C(3,4)$

B' A' $A(1,2)$ $B(5,2)$

(2?)

Determine whether the figure has rotational symmetry. If so, describe any rotations that map the figure onto itself.

D

No

⌘

$\dfrac{360°}{4}$

yes, 90°
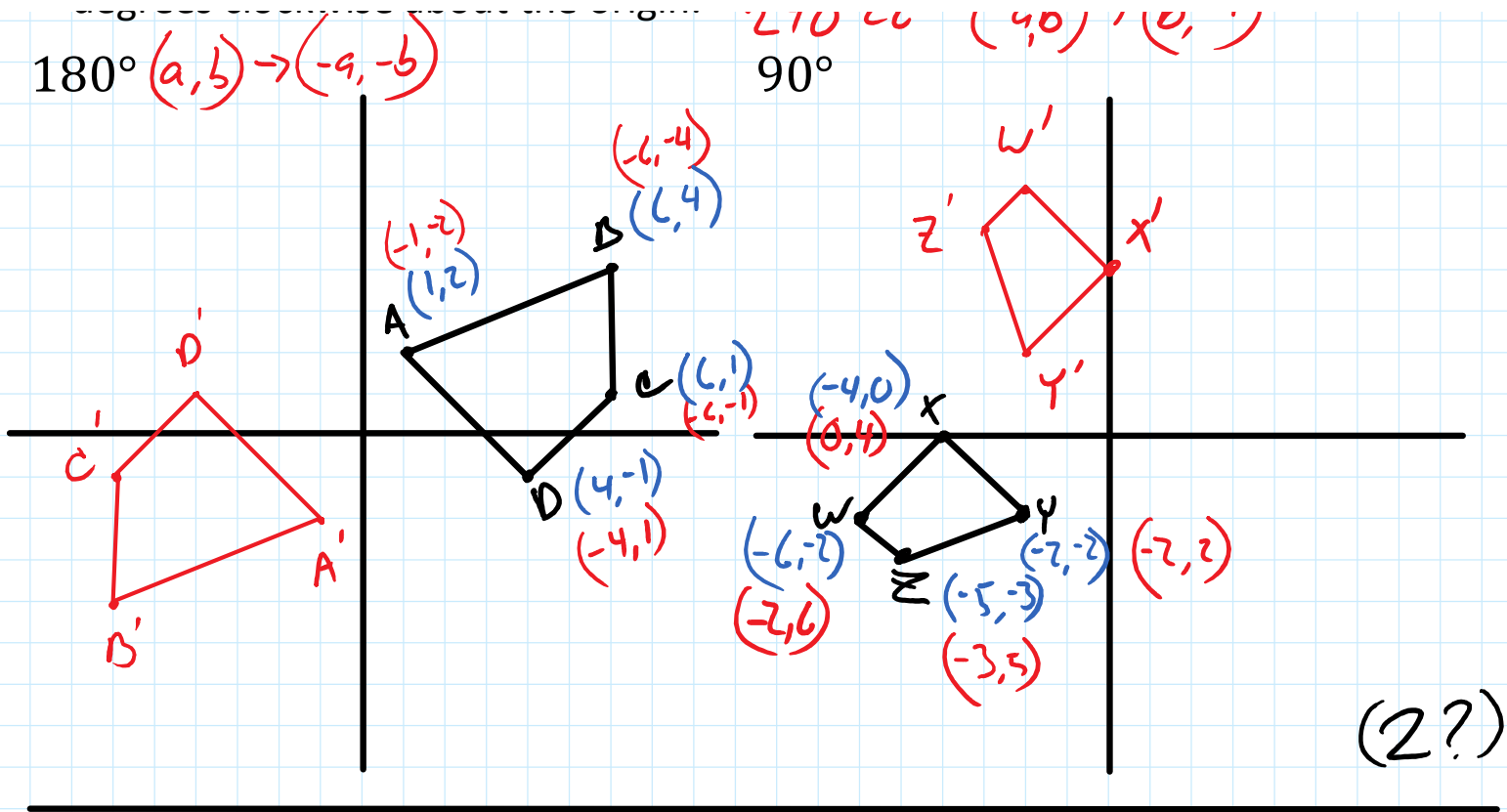
(2?)

Graph the polygon's image after a rotation of the given number of degrees clockwise about the origin.

$270°CC$ $(a,b) \rightarrow (b,-a)$

180° $(a,b) \rightarrow (-a,-b)$ 90°

180° $(a,b) \rightarrow (-a,-b)$ 90°

$(-6,-4)$
$B(6,4)$

$(-1,-2)$
$(1,2)$
A

$C \begin{pmatrix} 6,1 \\ 6,-1 \end{pmatrix}$ $(-4,0)$
$(0,4)$ X

D'
C'

$D (4,-1)$
$(-4,1)$

W'
Z'   X'
Y'

W $(-6,-2)$ Y
$(-2,6)$ Z $(-5,-3)$ $(-2,-2)$ $(-2,2)$
$(-3,5)$

A'

B'

(2?)

10 Total ?'s

Coordinate Rules for Reflections

- If (a, b) is reflected in the x-axis, then its image is the point $(a, -b)$.

- If (a, b) is reflected in the y-axis, then its image is the point $(-a, b)$.

- If (a, b) is reflected in the line $y = x$, then its image is the point (b, a).

- If (a, b) is reflected in the line $y = -x$, then its image is the point $(-b, -a)$.

Coordinate Rules for Rotations about the Origin

When a point (a, b) is rotated counterclockwise
about the origin, the following are true.

Coordinate Rules for Rotations about the Origin

When a point (a, b) is rotated counterclockwise about the origin, the following are true.

- For a rotation of 90°,
  $(a, b) \rightarrow (-b, a)$.

- For a rotation of 180°,
  $(a, b) \rightarrow (-a, -b)$.

- For a rotation of 270°,
  $(a, b) \rightarrow (b, -a)$.