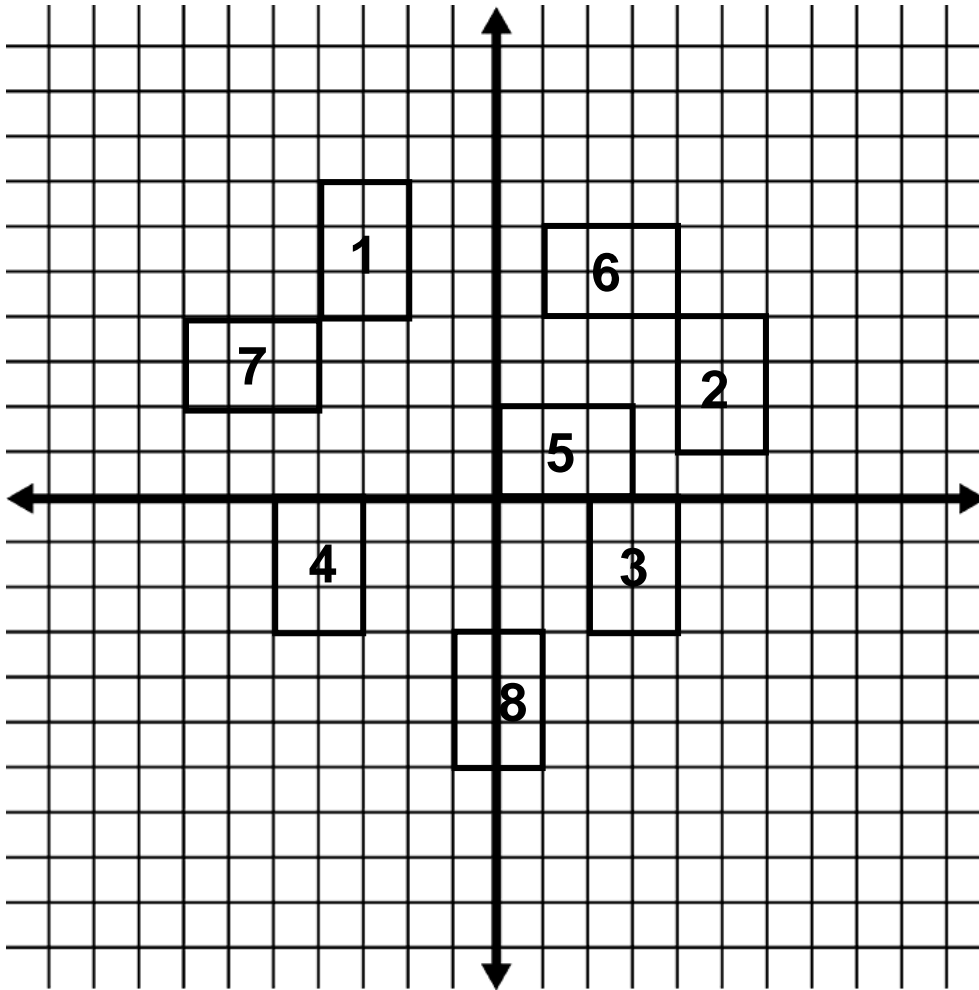


Compositions of Transformations

All rectangles in the grid below are congruent. Follow the instructions and then write the number of the rectangle that matches the location of the final image.



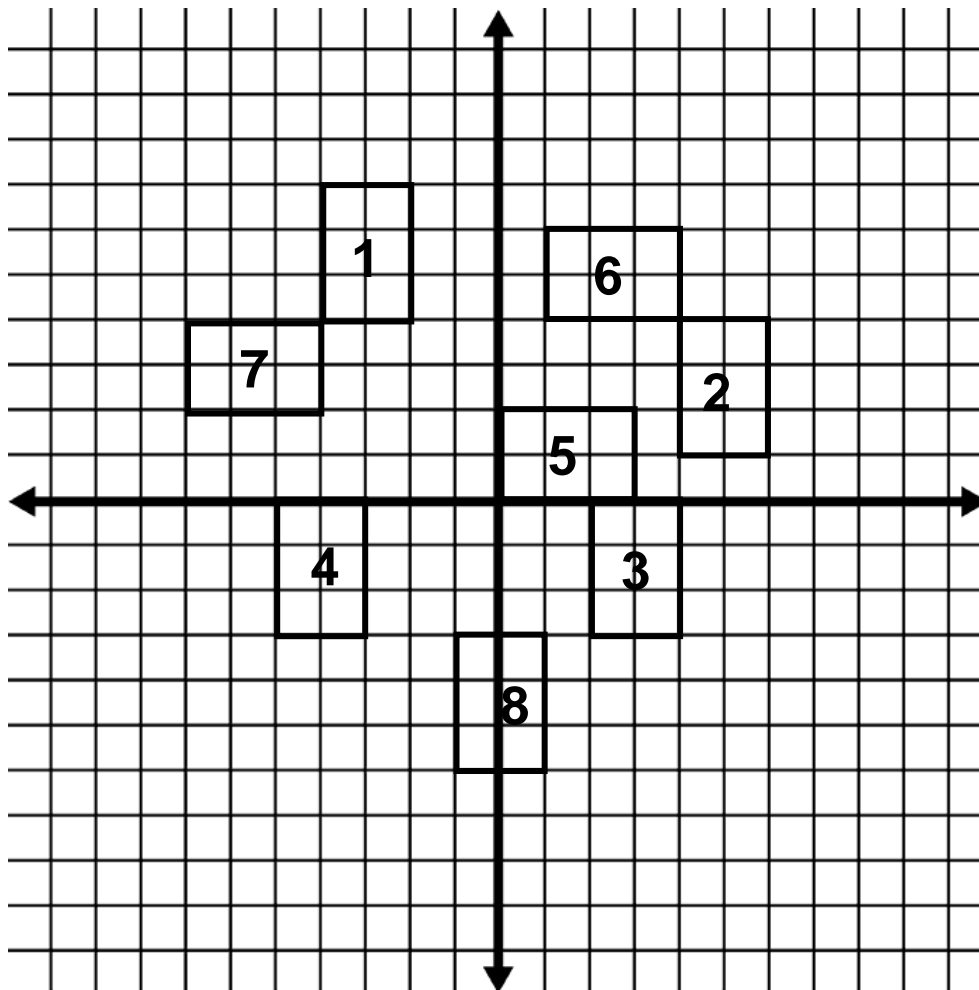
Which rectangle is the final image of each transformation?

1. Reflect Rectangle 1 over the y-axis. Then translate down three units and rotate 90° counterclockwise around the point $(3, 1)$. (Hint: redraw the axes so that the origin corresponds to $(3, 1)$.)
2. Translate Rectangle 2 down one unit and reflect over the x-axis. Then reflect over the line $x = 4$.
3. Reflect Rectangle 3 over the y-axis and then rotate 90° clockwise around the point $(-2, 0)$. Finally, glide five units to the right.
4. Rotate Rectangle 4 90° clockwise around the point $(-3, 0)$. Reflect over the line $y = 2$ and then translate one unit left.
5. Translate Rectangle 5 left five units. Rotate 90° clockwise around the point $(-2, 2)$ and glide up two spaces.
6. Rotate Rectangle 6 90° clockwise around the point $(4, 4)$ and translate down three units.
7. Rotate Rectangle 7 90° clockwise around $(-4, 4)$ and reflect over the line $x = -4$.
8. Reflect Rectangle 8 over the x-axis. Translate four units left and reflect over the line $y = 1.5$.

Compositions of Transformations

KEY

All rectangles in the grid below are congruent. Follow the instructions and then write the number of the rectangle that matches the location of the final image.



Which rectangle is the final image of each transformation?

KEY

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1. Reflect Rectangle 1 over the y-axis. Then translate down three units and rotate 90° counterclockwise around the point $(3, 1)$. (Hint: redraw the axes so that the origin corresponds to $(3, 1)$.)

3

2. Translate Rectangle 2 down one unit and reflect over the x-axis. Then reflect over the line $x = 4$.

5

3. Reflect Rectangle 3 over the y-axis and then rotate 90° clockwise around the point $(-2, 0)$. Finally, glide five units to the right.

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4. Rotate Rectangle 4 90° clockwise around the point $(-3, 0)$. Reflect over the line $y = 2$ and then translate one unit left.

1

5. Translate Rectangle 5 left five units. Rotate 90° clockwise around the point $(-2, 2)$ and glide up two spaces.

2

6. Rotate Rectangle 6 90° clockwise around the point $(4, 4)$ and translate down three units.

1

7. Rotate Rectangle 7 90° clockwise around $(-4, 4)$ and reflect over the line $x = -4$.

4

8. Reflect Rectangle 8 over the x-axis. Translate four units left and reflect over the line $y = 1.5$.