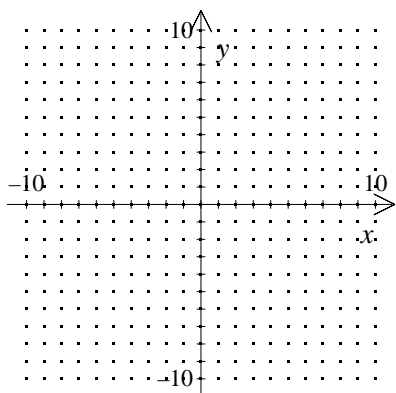


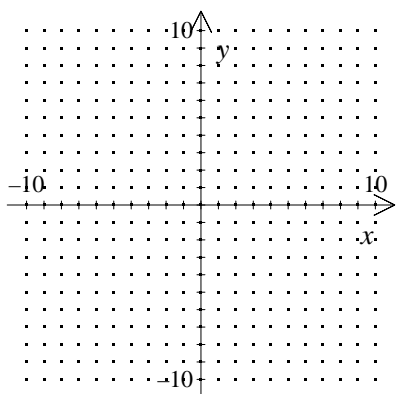
*P.I. G.G.54: Define, investigate, justify, and apply isometries in the plane (rotations, reflection, translations, glide reflections)*

- Graph the figure WXYZ with vertices  $W(-2, -1)$ ,  $X(-4, 1)$ ,  $Y(-7, -2)$ , and  $Z(-5, -4)$ . Rotate the figure WXYZ  $180^\circ$  and graph the rotation.



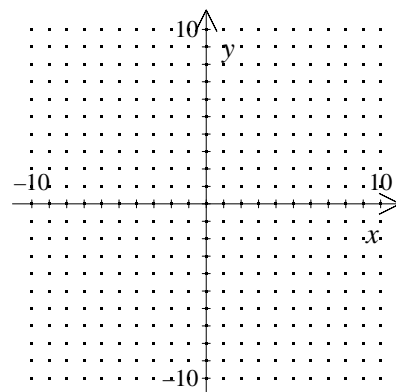
[1] \_\_\_\_\_

- Graph the figure WXYZ with vertices  $W(4, 4)$ ,  $X(1, 7)$ ,  $Y(-1, 5)$ , and  $Z(2, 2)$ . Rotate the figure WXYZ  $90^\circ$  clockwise and graph the rotation.



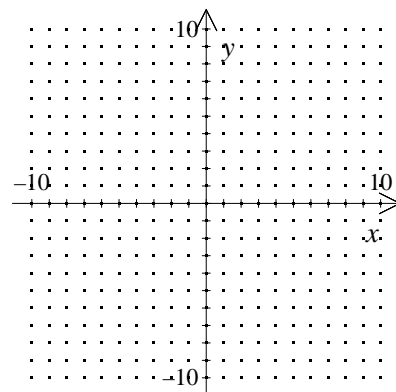
[2] \_\_\_\_\_

- Graph the figure WXYZ with vertices  $W(1, 2)$ ,  $X(0, 3)$ ,  $Y(-4, -1)$ , and  $Z(-3, -2)$ . Rotate the figure WXYZ  $90^\circ$  counterclockwise and graph the rotation.



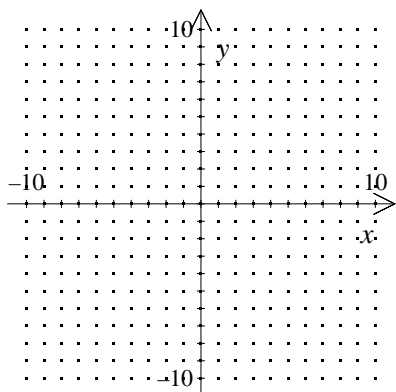
[3] \_\_\_\_\_

- Graph the figure WXYZ with vertices  $W(-5, -3)$ ,  $X(-9, 1)$ ,  $Y(-10, 0)$ , and  $Z(-6, -4)$ . Rotate the figure WXYZ  $180^\circ$  and graph the rotation.



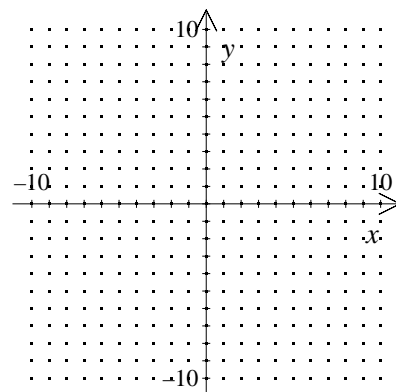
[4] \_\_\_\_\_

5. Graph the figure  $WXYZ$  with vertices  $W(-3, 5)$ ,  $X(-7, 9)$ ,  $Y(-9, 7)$ , and  $Z(-5, 3)$ . Rotate the figure  $WXYZ$   $90^\circ$  clockwise and graph the rotation.



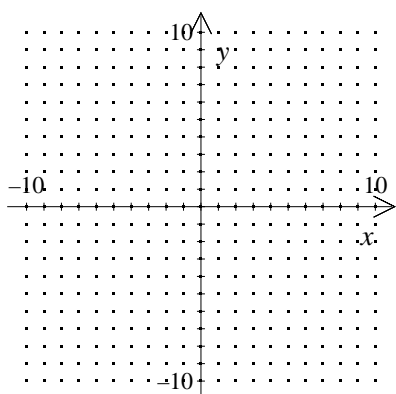
[5] \_\_\_\_\_

7. Graph the figure  $WXYZ$  with vertices  $W(-3, -2)$ ,  $X(-6, 1)$ ,  $Y(-7, 0)$ , and  $Z(-4, -3)$ . Rotate the figure  $WXYZ$   $90^\circ$  clockwise and graph the rotation.



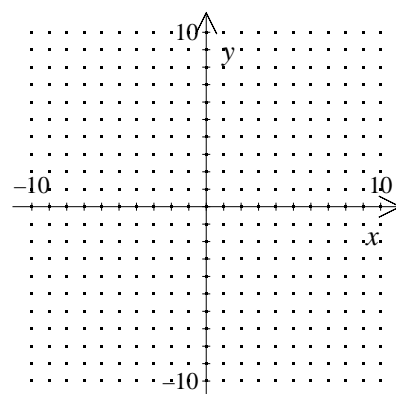
[7] \_\_\_\_\_

6. Graph the figure  $WXYZ$  with vertices  $W(-1, 4)$ ,  $X(-2, 5)$ ,  $Y(-5, 2)$ , and  $Z(-4, 1)$ . Rotate the figure  $WXYZ$   $90^\circ$  counterclockwise and graph the rotation.

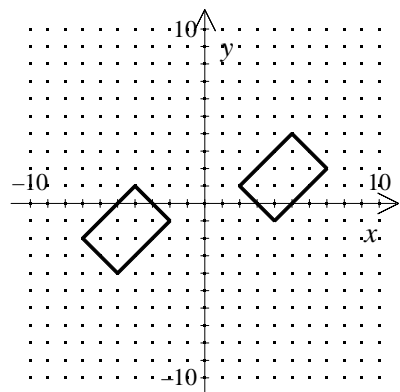


[6] \_\_\_\_\_

8. Graph the figure  $WXYZ$  with vertices  $W(2, -3)$ ,  $X(0, -1)$ ,  $Y(-4, -5)$ , and  $Z(-2, -7)$ . Rotate the figure  $WXYZ$   $90^\circ$  counterclockwise and graph the rotation.

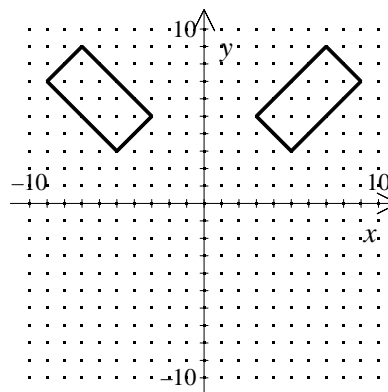


[8] \_\_\_\_\_



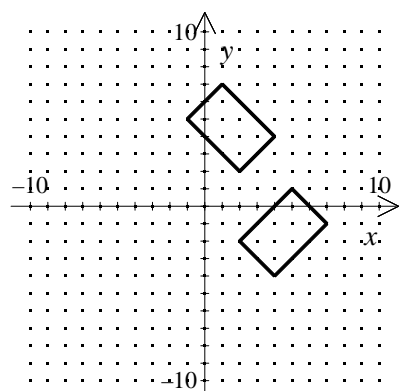
[1]

---



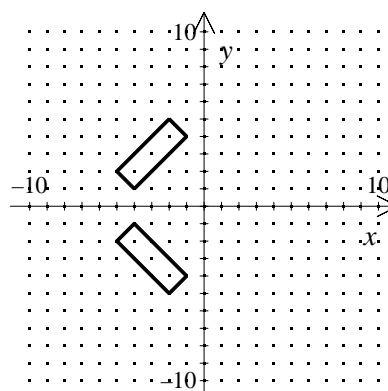
[5]

---



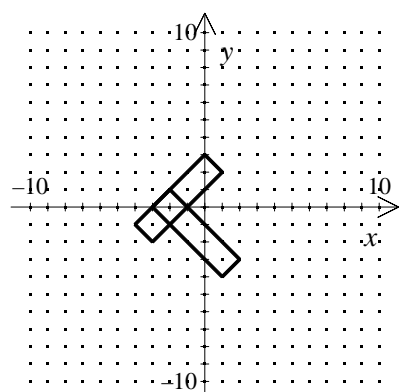
[2]

---



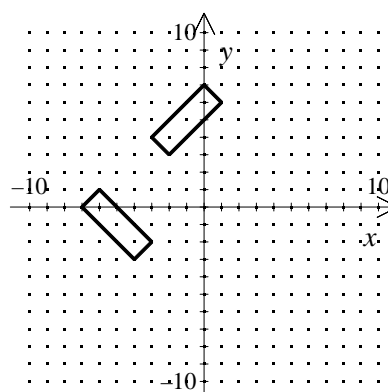
[6]

---



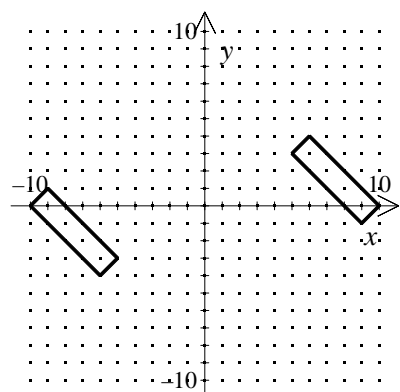
[3]

---



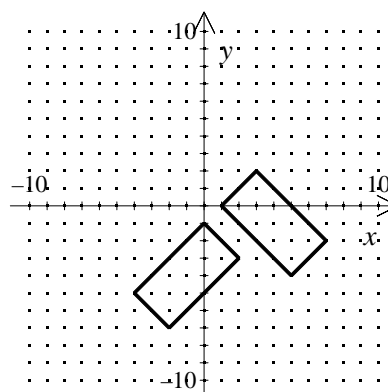
[7]

---



[4]

---



[8]

---