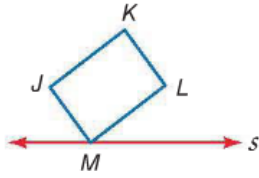Name:_____ Period:_____

Score:

_____/_____

_____%

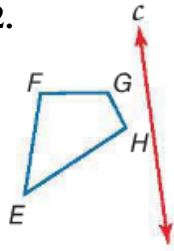**HW 8-1 HONORS: Reflections & Translations**

Draw a sketch of the image reflected over the given line.
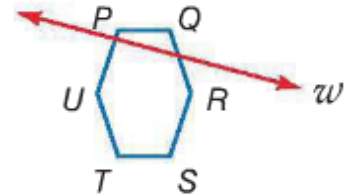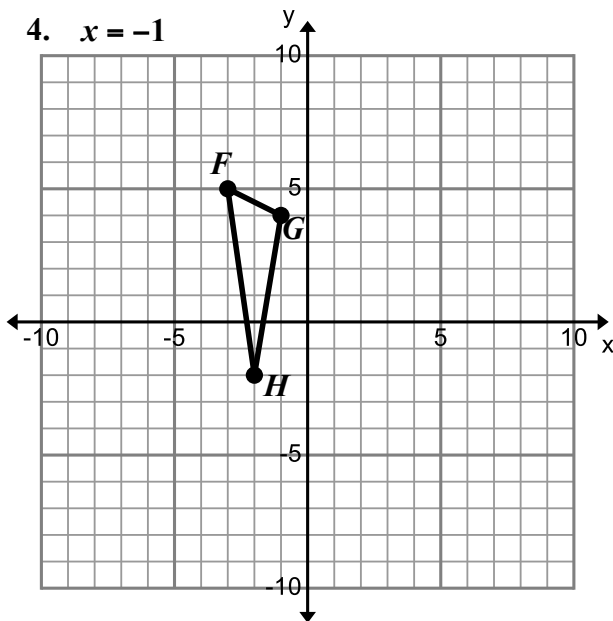
1.

2.

3.

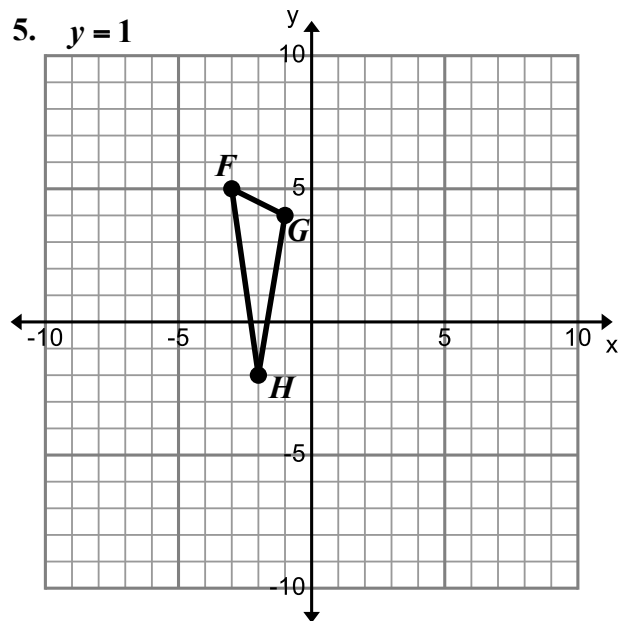**Reflect the image of V*FGH* in the given line and state the new vertices.**

4. $x = -1$

5. $y = 1$

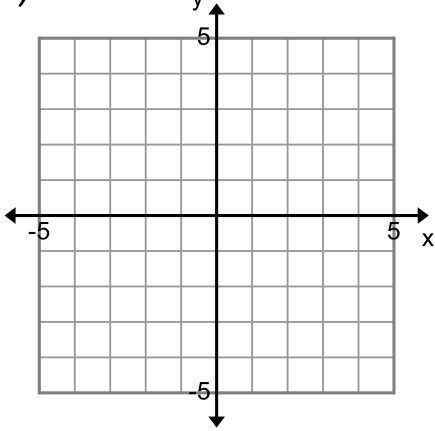
New vertices:

*F'*_____   *G'*_____   *H'*_____

New vertices:
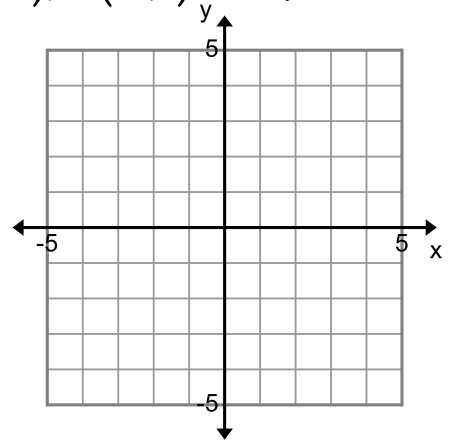
*F'*_____   *G'*_____   *H'*_____

Graph AND label each figure and its image under the given reflection, then state the new vertices.

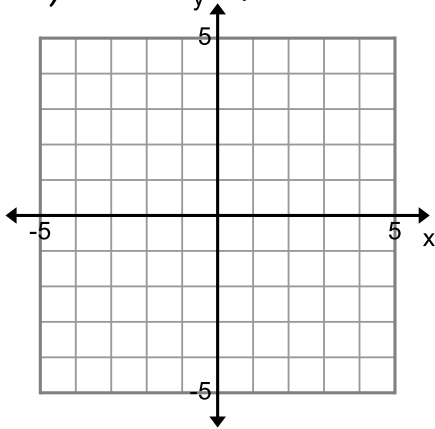6. *VDEF* with $D(-2, -1)$, $E(-1, 3)$, $F(3, -1)$ in the *x*-axis.

7. *ABCD* with $A(1, 4)$, $B(3, 2)$, $C(2, -2)$, $D(-3, 1)$ in the *y*-axis.

New vertices:
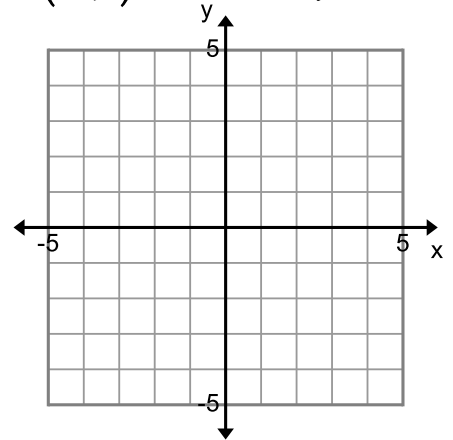
_____ _____ _____

New vertices:

_____ _____ _____ _____

8. *VDEF* with $D(-2, -1)$, $E(-1, 3)$, $F(3, -1)$ over the line $y = x$.

9. *ABCD* with $A(1, 4)$, $B(3, 2)$, $C(2, -2)$, $D(-3, 1)$ over the line $y = -x$.

New vertices:

_____ _____ _____

New vertices:

_____ _____ _____ _____

Describe the translation using coordinate notation.

10.

11.

_____

_____

Consider the translation that is defined by the coordinate notation $(x, y) \rightarrow (x+12,\ y-7)$

12. What is the image of $A(5,3)$?

13. What is the preimage of $D'(-2,1)$?

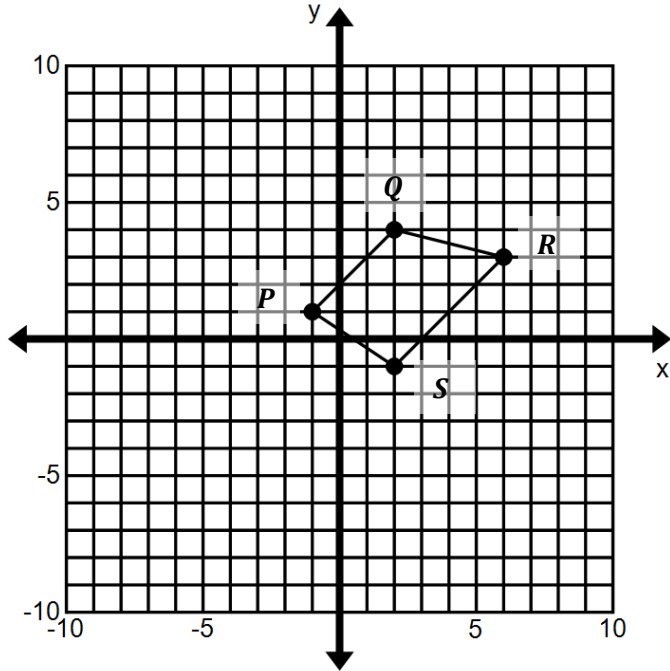**14.** What is the image of $B(0.5, 2.5)$?

15. What is the image of $E(-1,-2)$?

16. What is the preimage of $C'(0,-6)$?
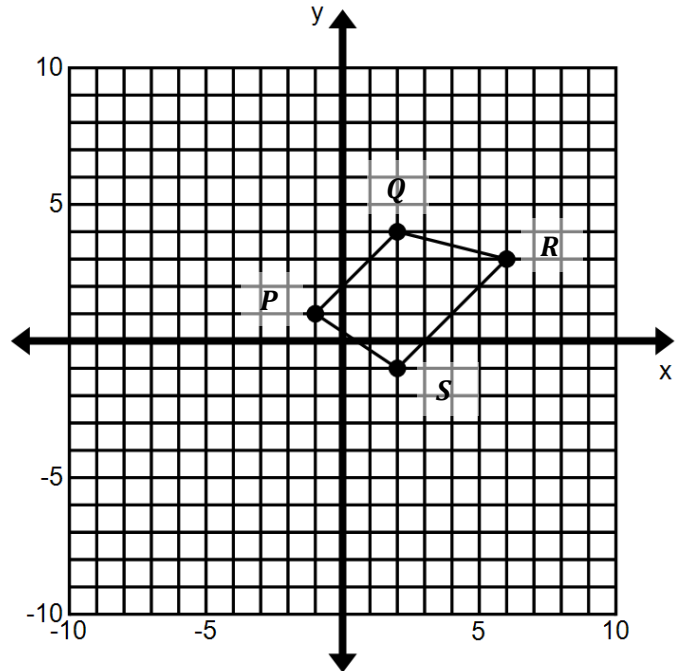
17. What is the preimage of $F'(-5.5,-5.5)$?

Use figure $PQRS$ **and draw its image after the translation, then state the new vertices.**

18. $(x, y) \rightarrow (x+5,\ y+7)$

19. $(x, y) \rightarrow (x+4,\ y-7)$

New vertices:

_____ _____ _____ _____

New vertices:

_____ _____ _____ _____