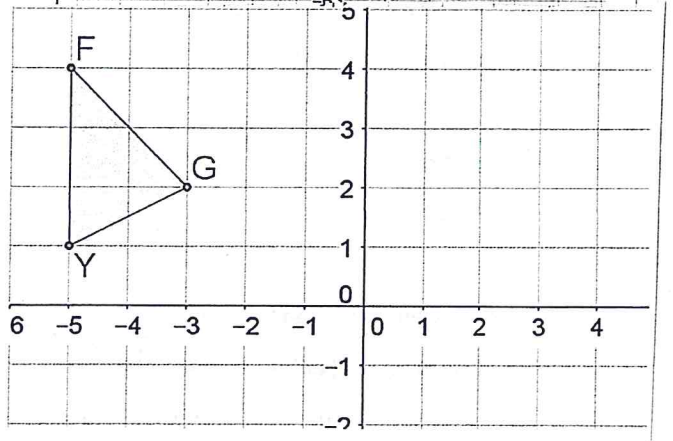
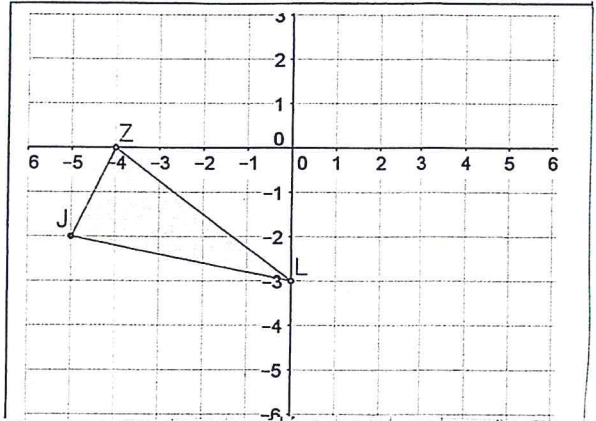
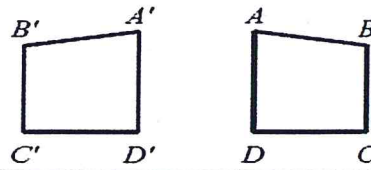


1H Mastering Rigid Motions

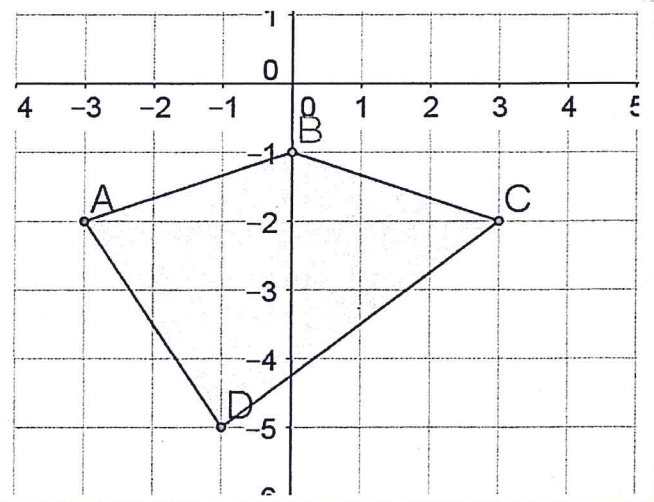
Name _____

- Does the transformation preserve orientation?
- Which way does ^{an} ~~a positive~~ angle of rotation turn a figure?
if direction is not mentioned?
- Rotate the image on the graph 90° about the origin.
- A rectangle is located entirely in quadrant III. If this rectangle is reflected across the y-axis, in which quadrant will the new rectangle be located?
- The vertices of $\triangle ABC$ are $A(-4,2)$, $B(-1,-3)$, and $C(6,5)$. The triangle is translated 2 units to the right and then reflected about the line $y = 1$. What is the final location of point A?
- Translate the figure 4 units right and 1 unit down.

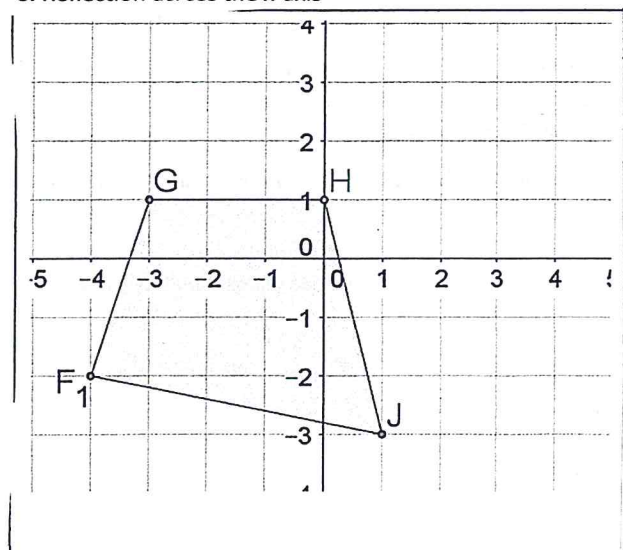


Perform the given transformation.

- Translation: $(x,y) \rightarrow (x+1,y+1)$



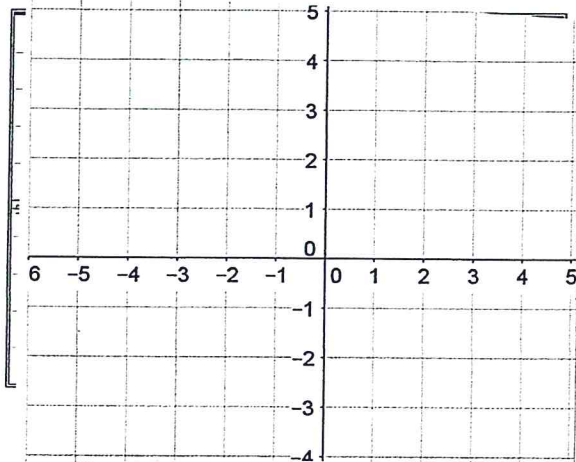
- Reflection across the x-axis



Graph the image of the figure using the given transformation.

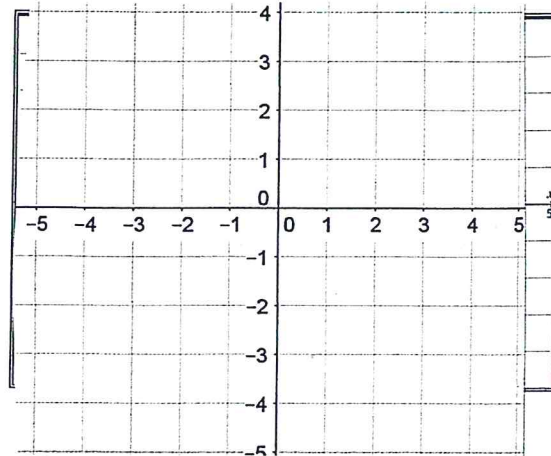
9. Rotation -90° about the origin
clockwise

$B(-2,0)$, $C(-4,3)$, $Z(-3,4)$, $X(-1,4)$



10. Reflection across $y=x$

$K(-5,-2)$, $A(-4,1)$, $I(0,-1)$, $J(-2,-4)$



Find the coordinates of the vertices of each figure after the given transformation.

11. Rotation 180° about the origin

$E(2,-2)$, $J(1,2)$, $R(3,3)$, $S(5,2)$

12. Reflection across $y=2$

$J(1,3)$, $U(0,5)$, $R(1,5)$, $C(3,2)$

13. Translation: $(x,y) \rightarrow (x+7,y-1)$

$J(-3,1)$, $F(-2,3)$, $N(-2,0)$

14. Translation: $(x,y) \rightarrow (x+6,y-3)$

$S(-3,3)$, $C(-1,4)$, $W(-2,-1)$

15. Name a transformation that does not preserve orientation.

16. Find the image of $(4,0)$ under a -90° rotation about the origin
clockwise

17. Find the image of $(0,5)$ under a 90° rotation about the origin.

Given points $A(5, 3)$, $B(-3, 2)$, and $C(4, 0)$.

18. What is the image of A about the line $x=1$?

Use the given diagram.

19. Identify the transformation using coordinate notation.

20. Reflect $\triangle CHB$ about the y -axis. Identify the coordinates of the image.

