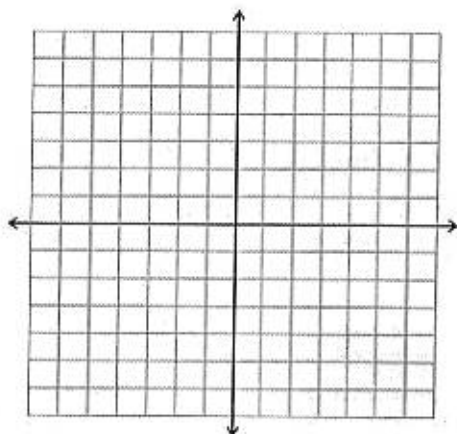


Multistep transformations

The vertices of a figure are given. Find the coordinates of the figure after the transformations given.

$R(-7, -5)$, $S(-1, -2)$, $T(-1, -5)$

Rotate 90° counterclockwise about the origin. Then translate 3 units left and 8 units up.

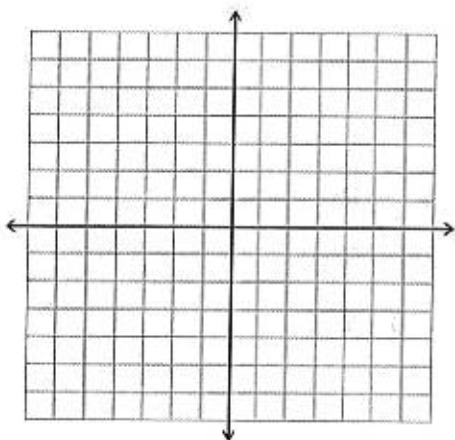


$R'(\quad , \quad)$ $S'(\quad , \quad)$ $T'(\quad , \quad)$

$R''(\quad , \quad)$ $S''(\quad , \quad)$ $T''(\quad , \quad)$

$J(-4, 4)$, $K(-3, 4)$, $L(-1, 1)$, $M(-4, 1)$

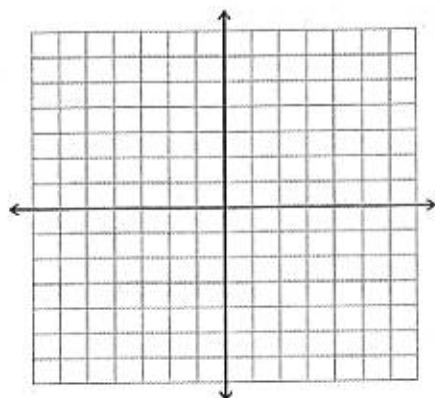
Reflect in the x -axis, and then rotate 180° about the origin.



$J'(\quad , \quad)$ $K'(\quad , \quad)$ $L'(\quad , \quad)$ $M'(\quad , \quad)$

$J''(\quad , \quad)$ $K''(\quad , \quad)$ $L''(\quad , \quad)$ $M''(\quad , \quad)$

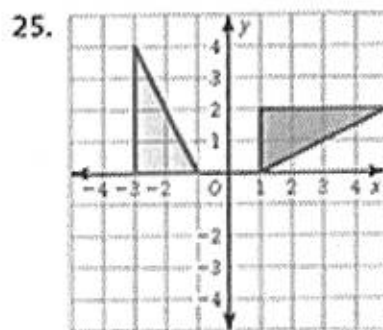
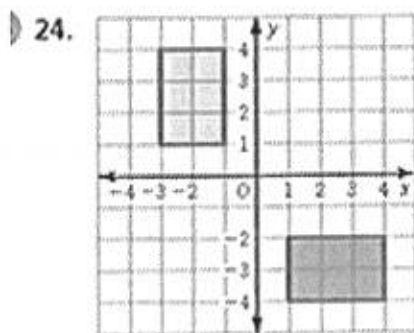
The vertices of a triangle are $P(-1, 2)$, $Q(-1, 0)$, and $R(2, 0)$. Rotate the triangle 180° about origin, and then reflect it in the x -axis. What are the coordinates of the image?



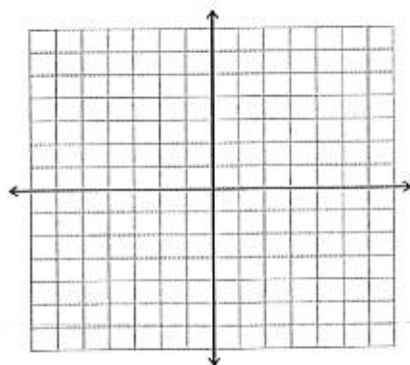
$P'(\quad , \quad)$ $Q'(\quad , \quad)$ $R'(\quad , \quad)$

$P''(\quad , \quad)$ $Q''(\quad , \quad)$ $R''(\quad , \quad)$

The red figure is congruent to the blue figure. Describe two different sequences of transformations in which the blue figure is the image of the red figure.



- Draw a right triangle in Quadrant II. Reflect the triangle in the x -axis. Rotate the original triangle about the origin 90° clockwise.



$A(\quad , \quad)$ $B(\quad , \quad)$ $C(\quad , \quad)$ $D(\quad , \quad)$

$A'(\quad , \quad)$ $B'(\quad , \quad)$ $C'(\quad , \quad)$ $D'(\quad , \quad)$

$A''(\quad , \quad)$ $B''(\quad , \quad)$ $C''(\quad , \quad)$ $D''(\quad , \quad)$