

Rotations

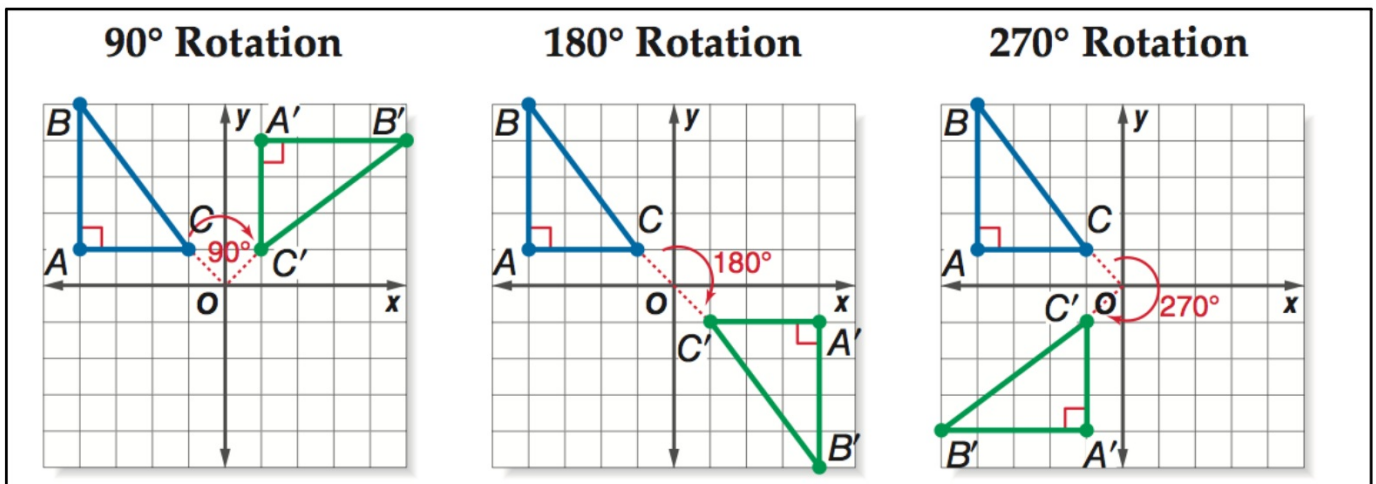


MAIN IDEA

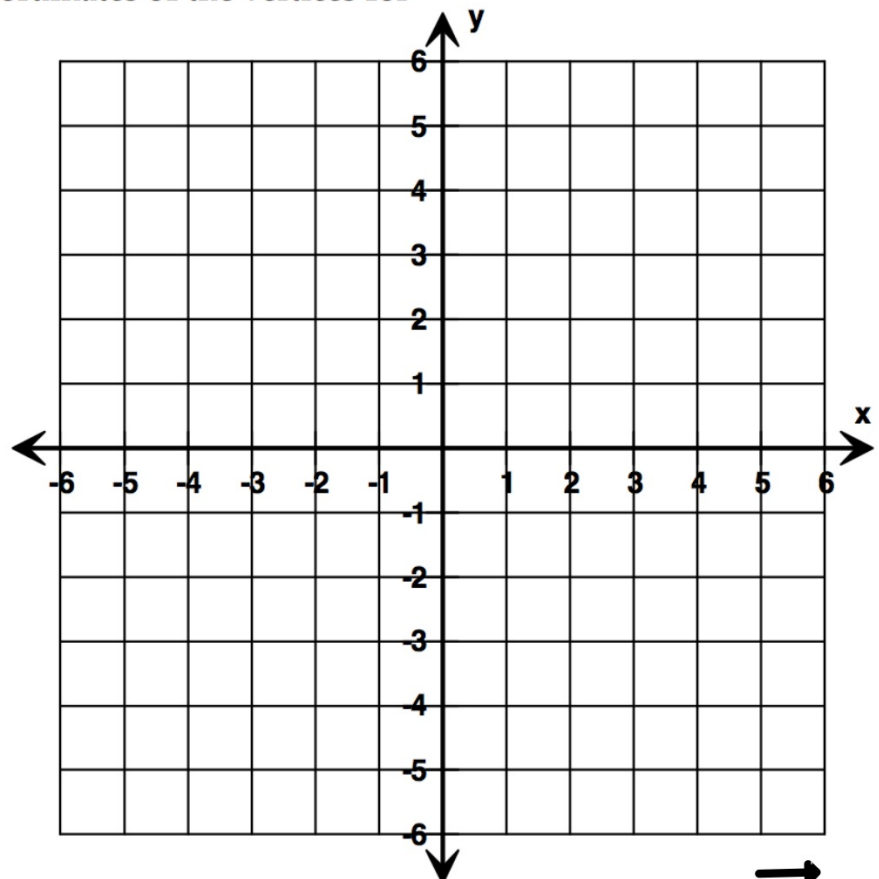
Graph rotations on a coordinate plane.

The type of transformation above is a rotation. A **rotation** occurs when a figure is rotated around a point. It can also be called a turn. A rotation does not change the size or shape of the figure.

The rotations shown below are clockwise around the origin.



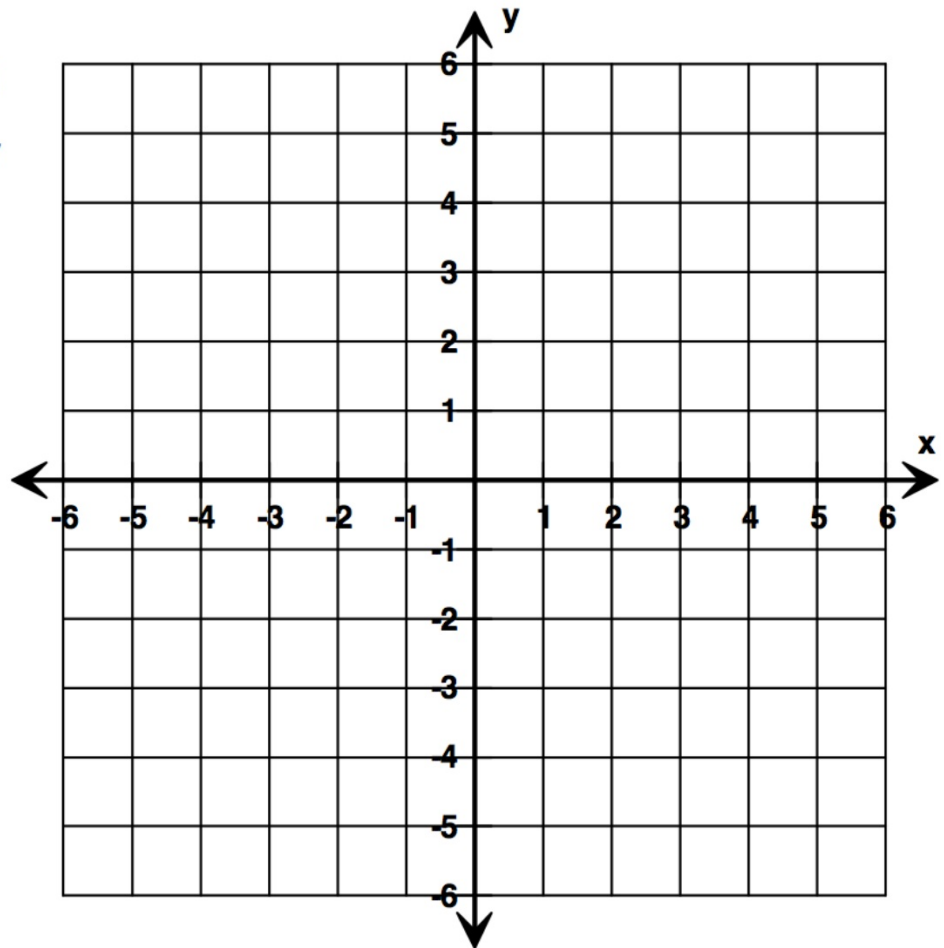
- 1) Triangle RST has vertices $R(1, 3)$, $S(4, 4)$, and $T(2, 1)$. Graph the figure and its image after a clockwise rotation of 90° about the origin. Then give the coordinates of the vertices for triangle $R'S'T'$.



- 2) Draw and label triangle ABC with vertices $A(-4, 1)$, $B(-4, 5)$, and $C(-1, 1)$.

Rotate triangle ABC 180°

Write the coordinates of triangle $A'B'C'$



- 3)  **CHECK Your Progress**

Triangle XYZ has vertices $X(-5, 4)$, $Y(-1, 2)$, and $Z(-3, 1)$. Graph the figure and its image after a counterclockwise rotation about the origin of 90° . Then give the coordinates of the vertices for triangle $X'Y'Z'$.

