Rotations

When a figure is rotated 90°, 180°, or 270° about the origin O in a coordinate plane, you can use the following rules:

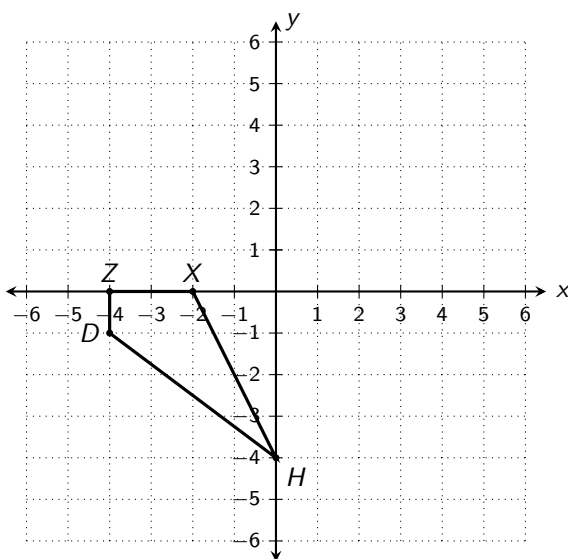1. Every 90° rotated switches the x- and y-coordinates.

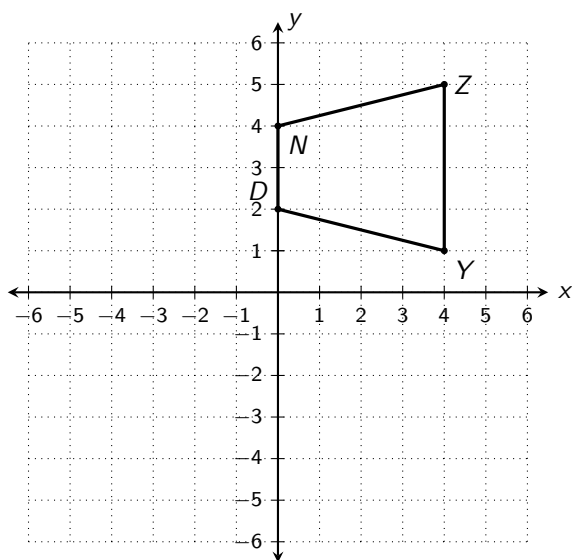2. Every 90° rotated is a new quadrant the point is in.

$(0, +)$

$(-, +)$ $(+, +)$

$(-, 0)$ $(+, 0)$

$(-, -)$ $(+, -)$

$(0, -)$
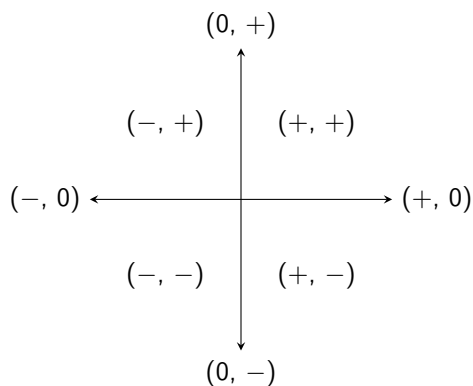
*** *Unless otherwise stated, rotations are performed counterclockwise.* ***

Example 1. Rotate each of the following. List the coordinates of the rotated image.

(a) Rotate 90° about the origin.

(b) Rotate 180° about the origin.

(c) Rotate 270° about the origin.