Rotations

Name _____

Date _____ Period _____

A transformation in which all points of a figure are rotated around a particular point of rotation.

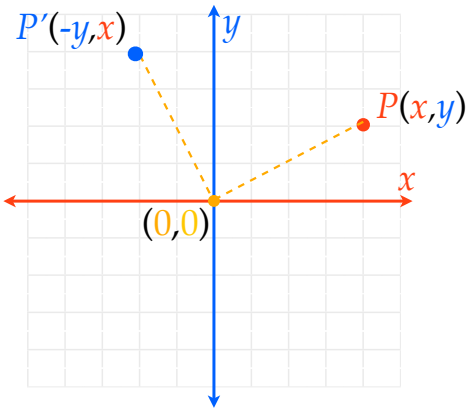
NOTE: The image is congruent to the preimage, so a rotation is an isometry.

A transformation in which all points of a figure are rotated around a particular point of rotation.

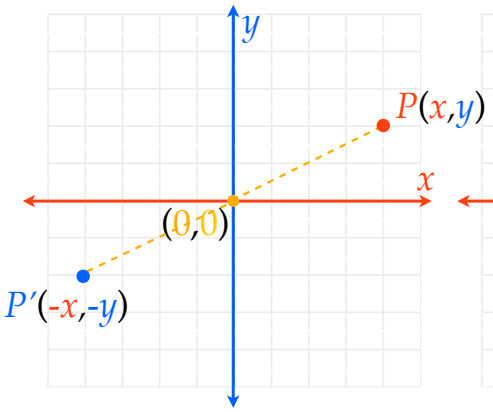
NOTE: The image is congruent to the preimage, so a rotation is an isometry.

Within the coordinate plane, counterclockwise around the origin

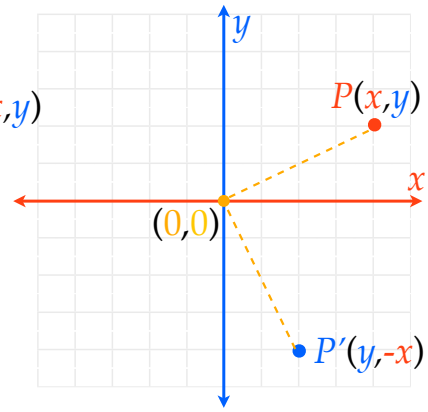
90° counterclockwise



180° counterclockwise

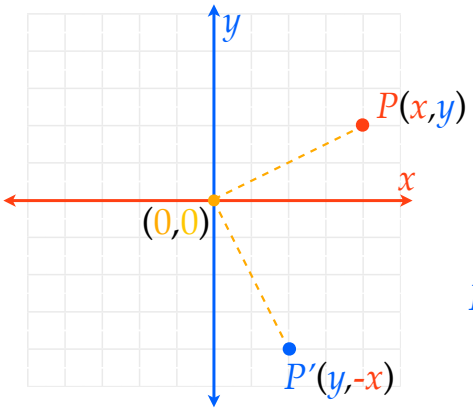


270° counterclockwise

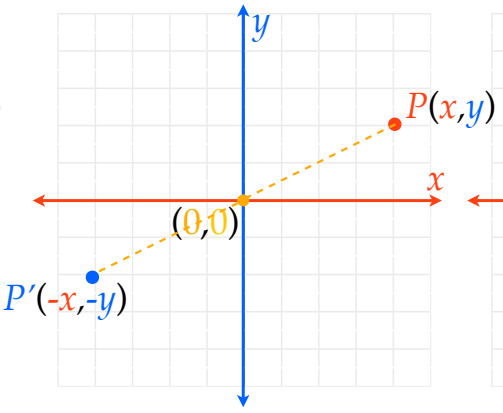


Within the coordinate plane, clockwise around the origin

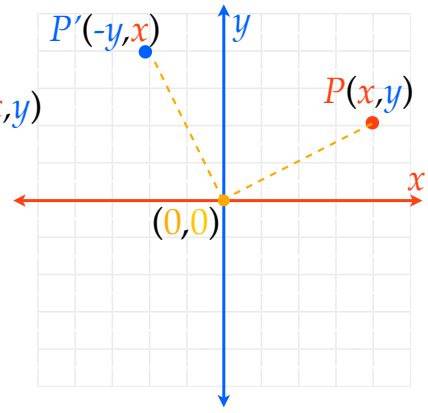
90° clockwise



180° clockwise



270° clockwise



Rotation

within the coordinate plane

90° counterclockwise

$P(x,y) \rightarrow P'(-y,x)$

90° clockwise

$P(x,y) \rightarrow P'(y,-x)$

180° counterclockwise

$P(x,y) \rightarrow P'(-x,-y)$

180° clockwise

$P(x,y) \rightarrow P'(-x,-y)$

270° counterclockwise

$P(x,y) \rightarrow P'(y,-x)$

270° clockwise

$P(x,y) \rightarrow P'(-y,x)$

90° counterclockwise
270° clockwise
$P(x,y) \rightarrow P'(-y,x)$

180° counterclockwise
180° clockwise
$P(x,y) \rightarrow P'(-x,-y)$

270° counterclockwise
90° clockwise
$P(x,y) \rightarrow P'(y,-x)$

(2,5)

90° counterclockwise
270° clockwise
$P(2,5) \rightarrow$

180° counterclockwise
180° clockwise
$P(2,5) \rightarrow$

270° counterclockwise
90° clockwise
$P(2,5) \rightarrow$

Rotate the following figure around the origin 90° clockwise.

Rotating 90° clockwise
$P(x,y) \rightarrow P'(y,-x)$

$A(-2,-5) \rightarrow$

$B(5,-7) \rightarrow$

$C(4,3) \rightarrow$