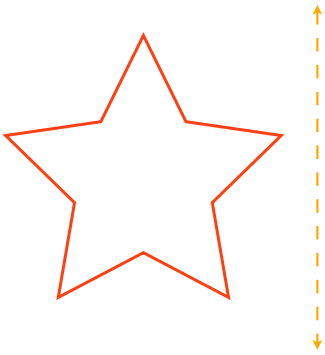
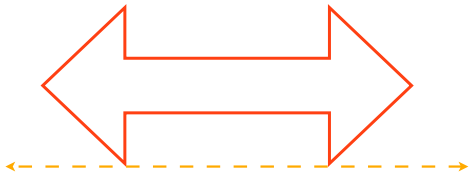
Reflections

Name _____

Date _____ Period _____

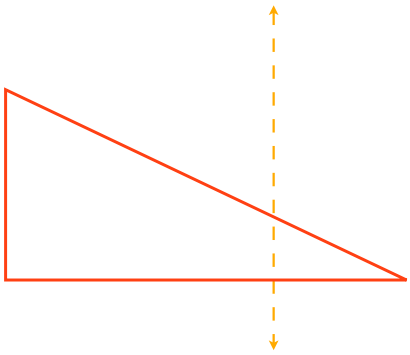
A transformation in which all points of a figure are reflected over a particular line of reflection.

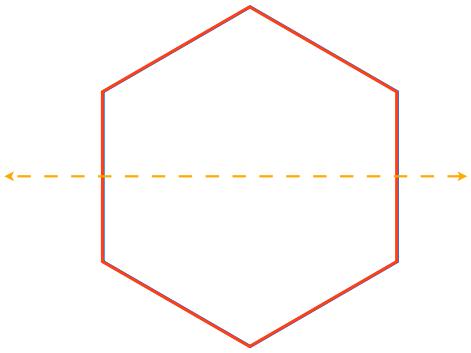




NOTE: The image is congruent to the preimage, so a reflection is an isometry.

A transformation in which all points of a figure are reflected over a particular line of reflection.





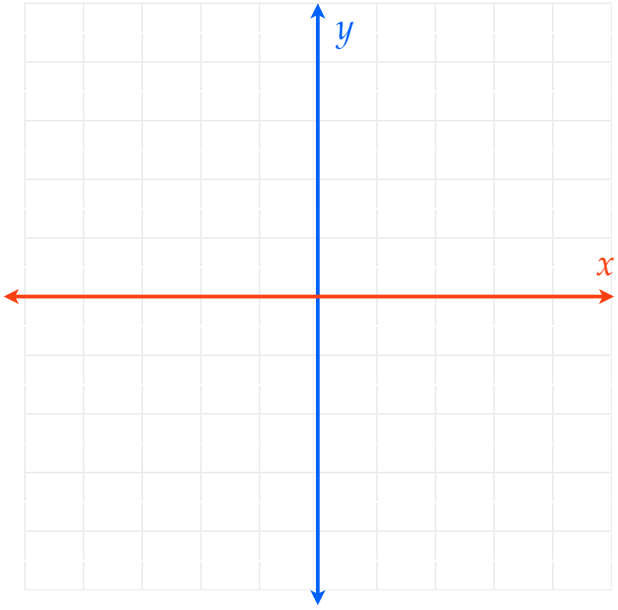
NOTE: The image is congruent to the preimage, so a reflection is an isometry.

Are the following transformations reflections? If so draw in the line of reflection.

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

Within the Coordinate Plane

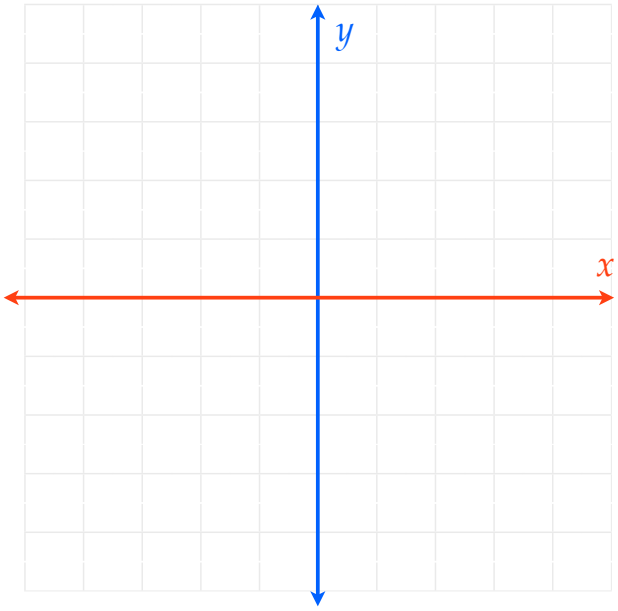
Reflect point $P(3,2)$, across line $x = 1$



Within the Coordinate Plane

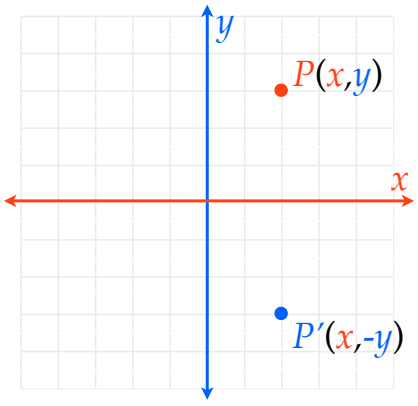
Reflect point $P(3,2)$, across line $x = 1$

Reflect point $S(-2,-4)$, across line $y = -1$

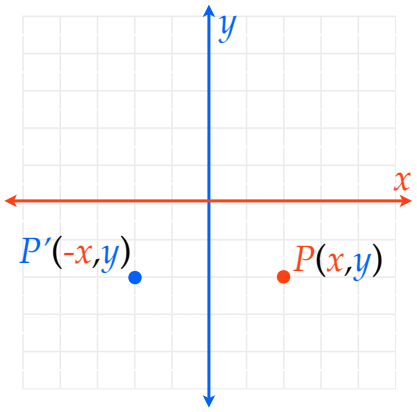


Within the Coordinate Plane

Reflecting over x-axis

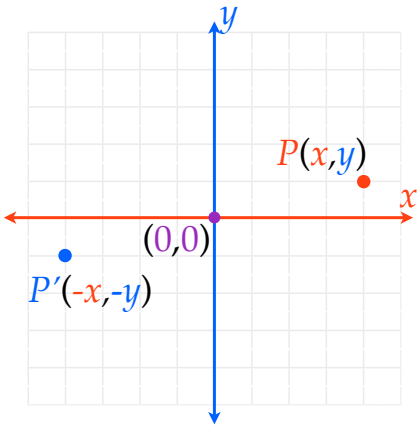


Reflecting over y-axis

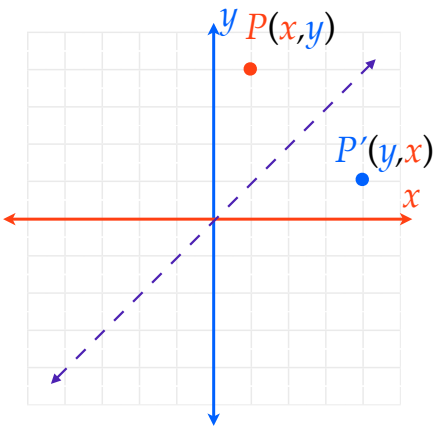


Within the Coordinate Plane

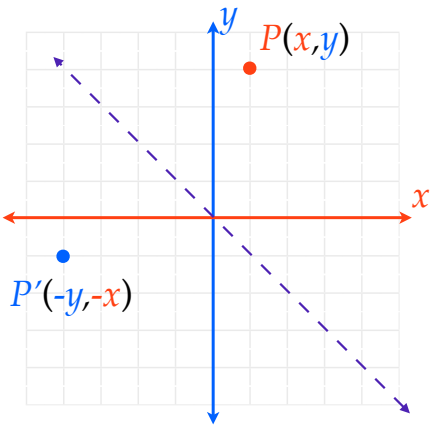
Reflecting across origin



Reflecting over line $y = x$



Reflecting over line $y = -x$



Within the Coordinate Plane

Reflecting over x-axis
$P(x,y) \rightarrow P'(x,-y)$

Reflecting over y-axis
$P(x,y) \rightarrow P'(-x,y)$

Reflecting across origin
$P(x,y) \rightarrow P'(-x,-y)$

Reflecting over line $y = x$
$P(x,y) \rightarrow P'(y,x)$

Reflecting over line $y = -x$
$P(x,y) \rightarrow P'(-y,-x)$

$(2,5)$

Reflecting over x-axis
$P(2,5) \rightarrow$

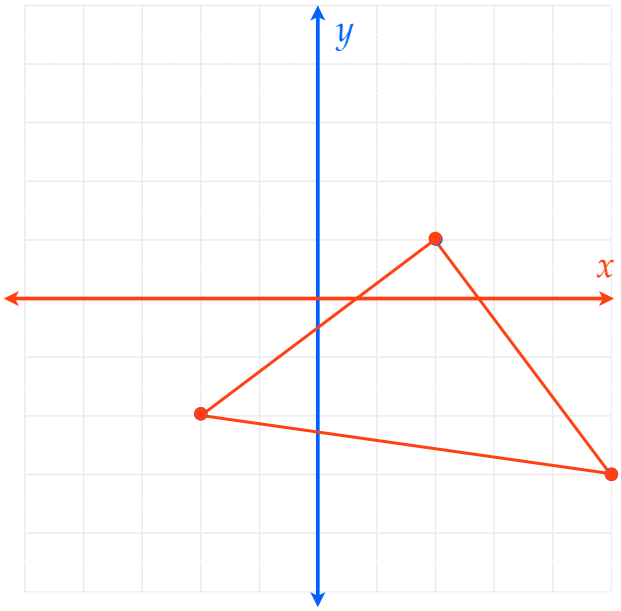
Reflecting over y-axis
$P(2,5) \rightarrow$

Reflecting across origin
$P(2,5) \rightarrow$

Reflecting over line $y = x$
$P(2,5) \rightarrow$

Reflecting over line $y = -x$
$P(2,5) \rightarrow$

Reflect the following figure across the y-axis.



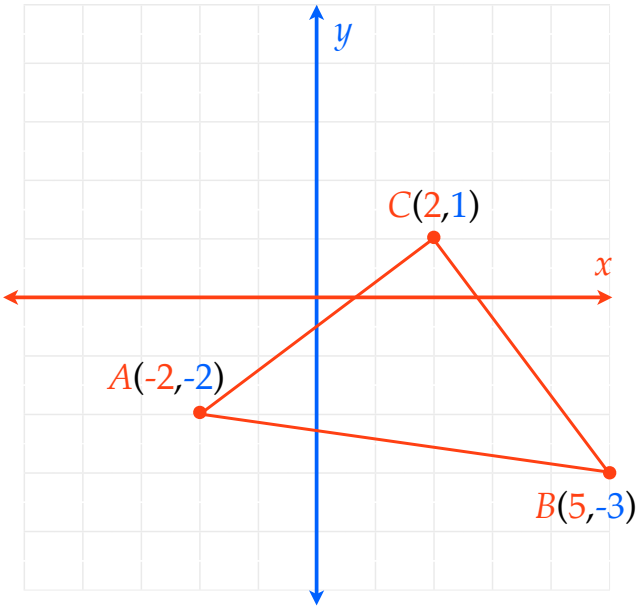
Reflect the following figure across the y-axis.

Reflecting over y-axis
$P(x,y) \rightarrow P'(-x,y)$

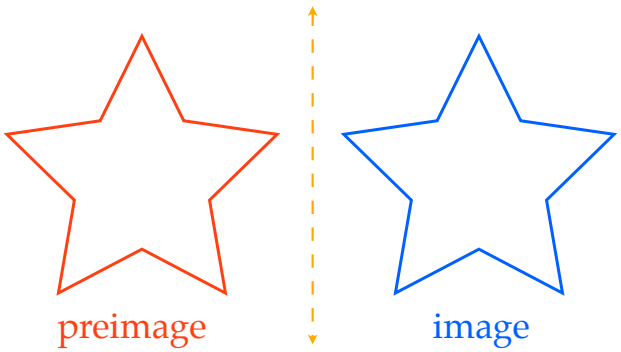
$A(-2,-2) \rightarrow$

$B(5,-3) \rightarrow$

$C(2,1) \rightarrow$



Over a line of reflection



Within the Coordinate Plane

Reflecting over x-axis
$P(x,y) \rightarrow P'(x,-y)$

Reflecting over y-axis
$P(x,y) \rightarrow P'(-x,y)$

Reflecting across origin
$P(x,y) \rightarrow P'(-x,-y)$

Reflecting over line $y = x$
$P(x,y) \rightarrow P'(y,x)$

Reflecting over line $y = -x$
$P(x,y) \rightarrow P'(-y,-x)$