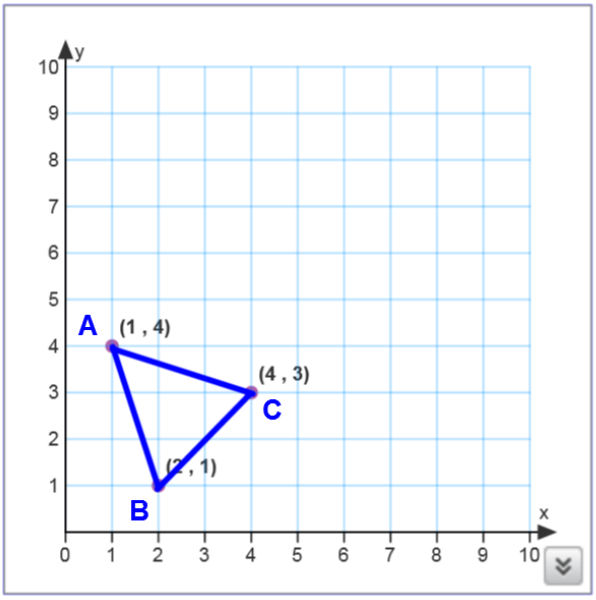
Lesson 1.3 – Coordinate Notation for Transformations



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (x + 6, y - 1)

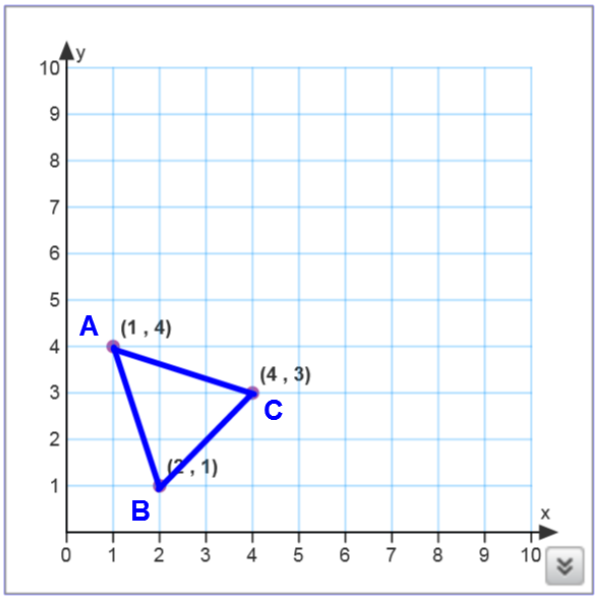
A(1,4).....A'( )

B(2,1).....B'( )

C(4,3).....C'( )

Type of Transformation: _____

Rigid Motion? (Y/N): _____



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (2x, 2y)

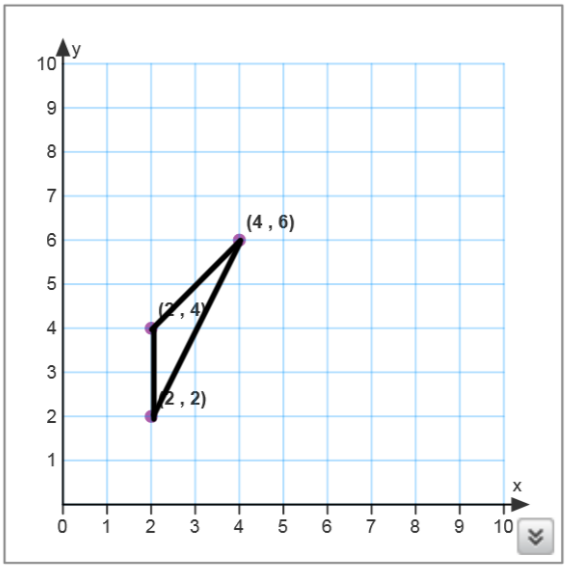
A(1,4).....A'( )

B(2,1).....B'( )

C(4,3).....C'( )

Type of Transformation: _____

Rigid Motion? (Y/N): _____



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (1/2x, 1/2y)

A(2,4).....A'( )

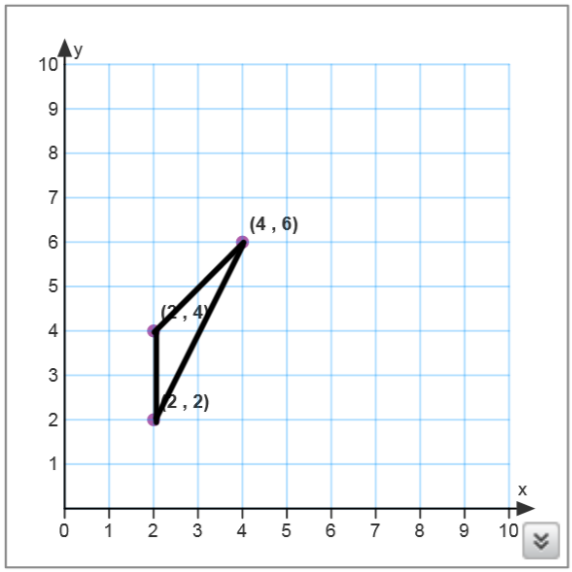
B(2,2).....B'( )

C(4,6).....C'( )

Type of Transformation: _____

Rigid Motion? (Y/N): _____

Lesson 1.3 – Coordinate Notation for Transformations



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

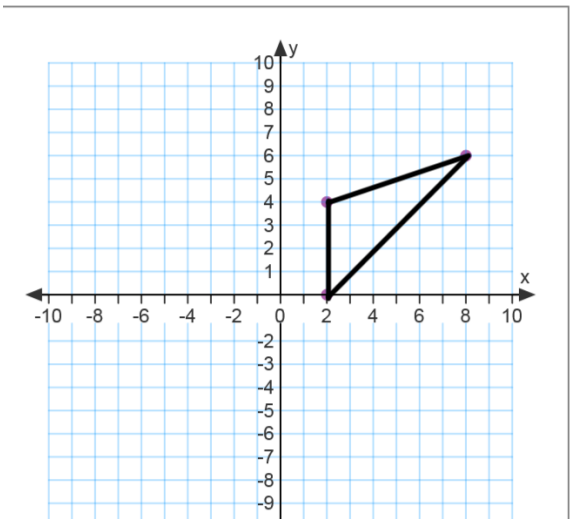
(x,y) → (2x, y)

A(2,4).....A'( )

B(2,2).....B'( )

C(4,6).....C'( )

Type of Transformation: _____
Rigid Motion? (Y/N): _____



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

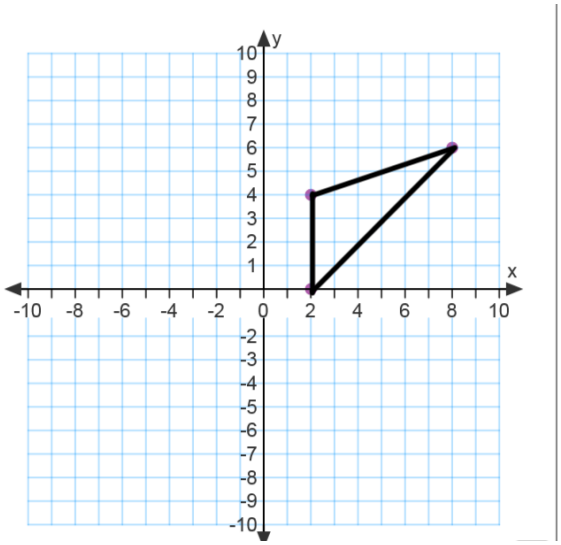
(x,y) → (-x, y)

A(2,4).....A'( )

B(2,0).....B'( )

C(8,6).....C'( )

Type of Transformation: _____
Rigid Motion? (Y/N): _____



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (-y, x)

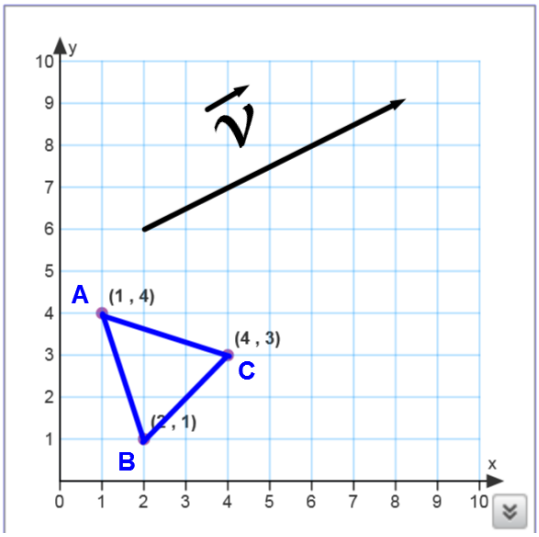
A(2,4).....A'( )

B(2,0).....B'( )

C(8,6).....C'( )

Type of Transformation: _____
Rigid Motion? (Y/N): _____

Lesson 2.1 – Translations with Vectors



Vector - $\vec{v}$

Vector notation for a translation: $\langle x, y \rangle$

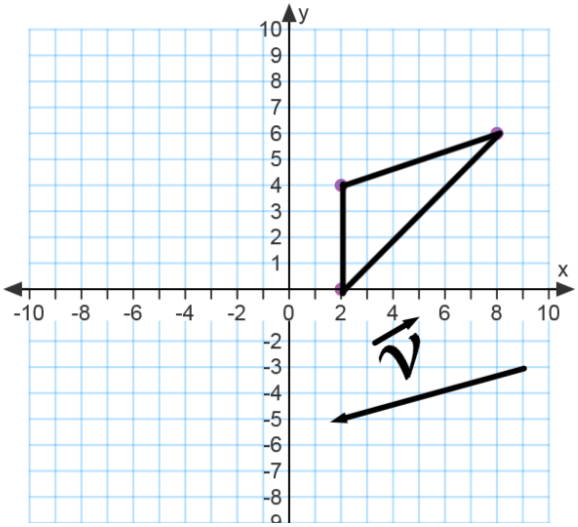
This means, how much to I move in the x direction, and how much to I move in the y direction?

Write the translation in vector notation: _____
Rigid Motion? (Y/N): _____

A(1,4).....A'( )

B(2,1).....B'( )

C(4,3).....C'( )



Write the translation in vector notation: _____
Rigid Motion? (Y/N): _____

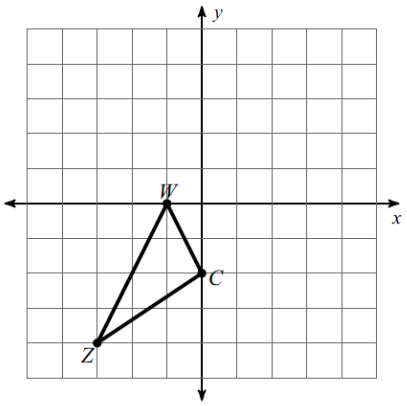
A(2,4).....A'( )

B(2,0).....B'( )

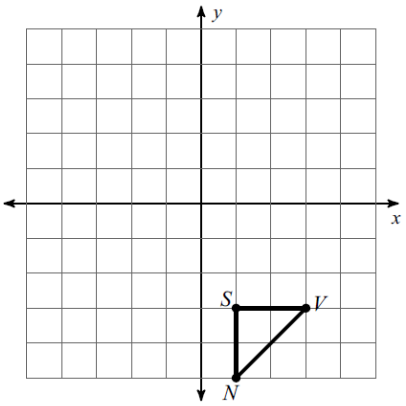
C(8,6).....C'( )

Extra Practice – Draw the image based on the following coordinate rules. Also state the VECTOR NOTATION for each of those rules.

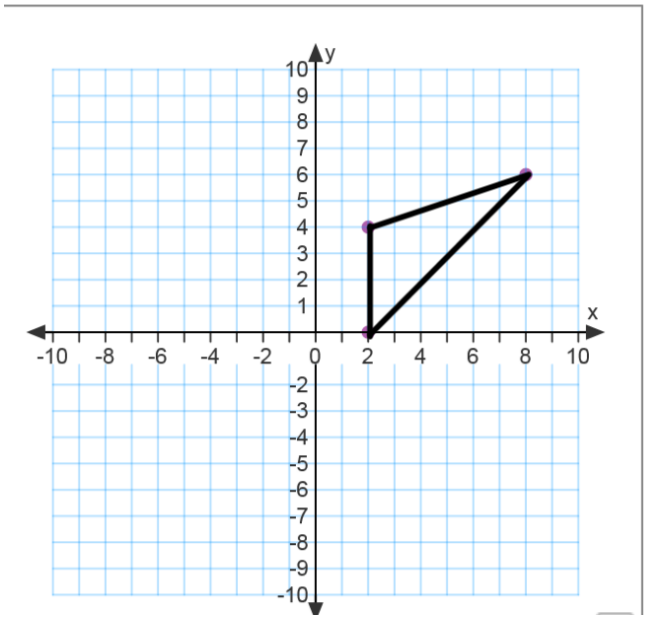
1) translation: $(x, y) \rightarrow (x + 5, y - 1)$



2) translation: $(x, y) \rightarrow (x - 1, y + 6)$



Lesson 2.2 - Reflections



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

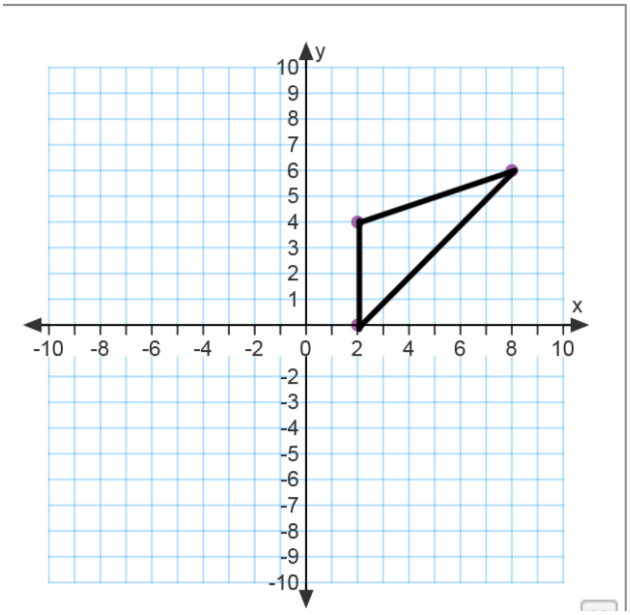
(x,y) → (-x , y)

A(2,4).....A'( )

B(2,0).....B'( )

C(8,6).....C'( )

What is the line of reflection? _____



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

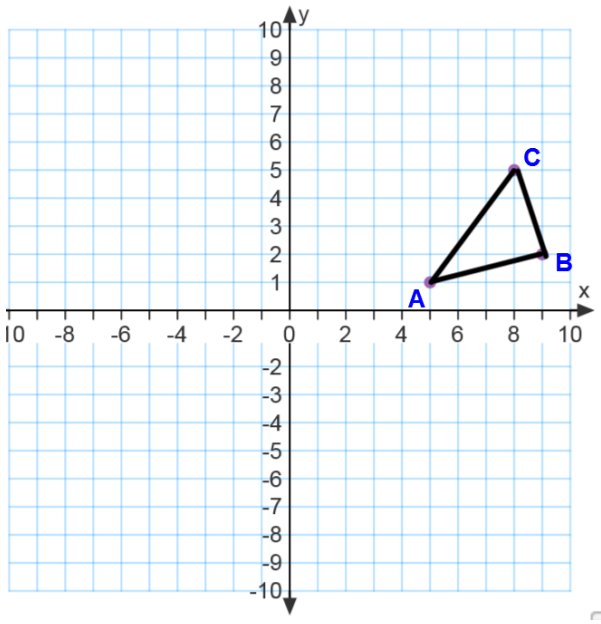
(x,y) → (x , -y)

A(2,4).....A'( )

B(2,0).....B'( )

C(8,6).....C'( )

What is the line of reflection? _____



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (y,x)

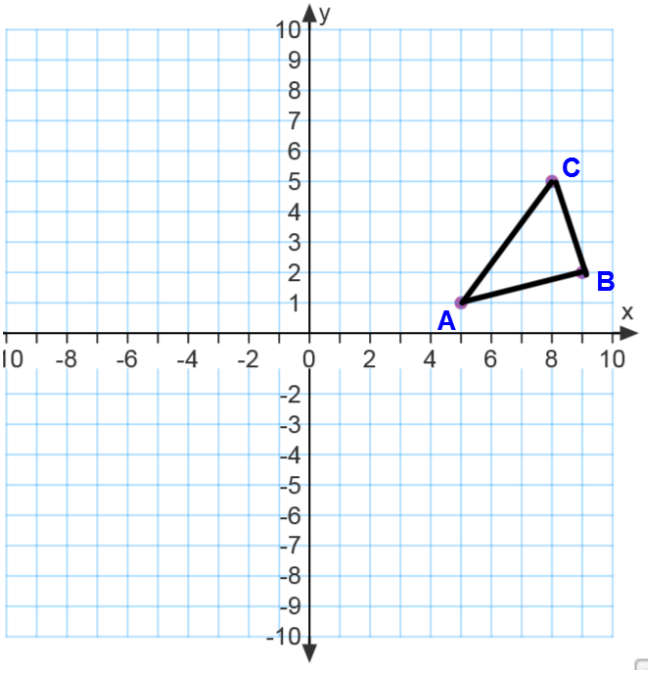
A(5,1).....A'( )

B(9,2).....B'( )

C(8,5).....C'( )

What is the line of reflection? _____

Lesson 2.2 – Reflections



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

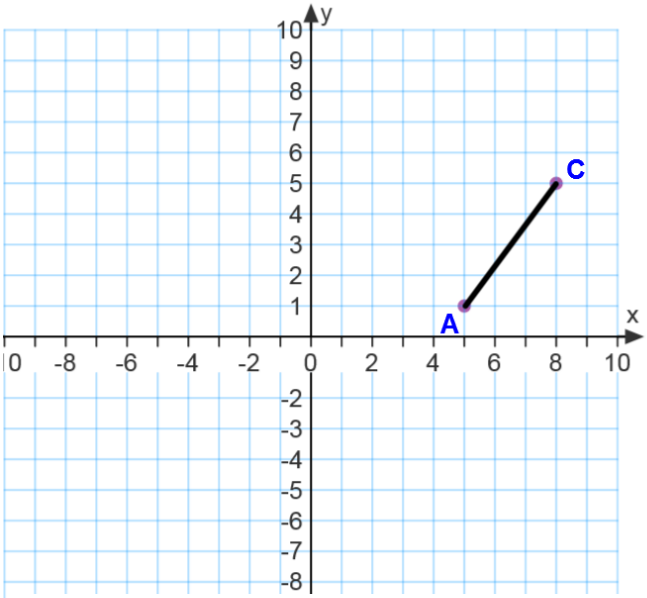
(x,y) → (-y,-x)

A(5,1).....A'( )

B(9,2).....B'( )

C(8,5).....C'( )

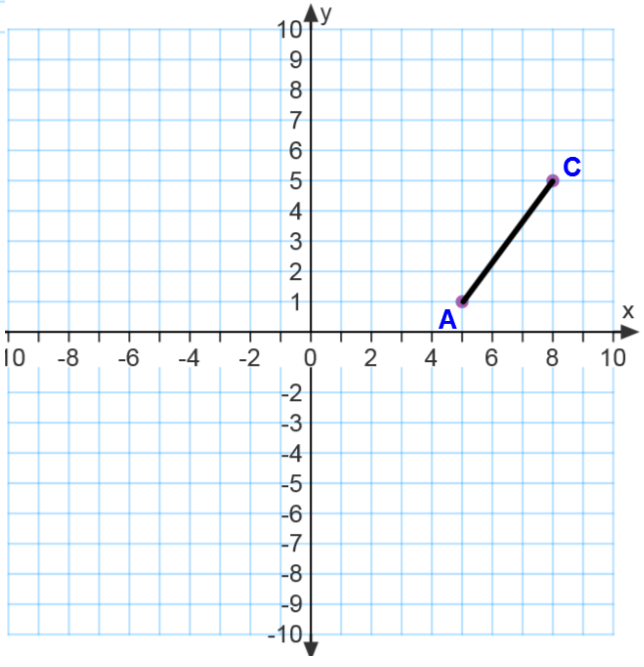
What is the line of reflection? _____



Reflect segment AC over the line x = 2

A(5,1).....A'( )

C(8,5).....C'( )

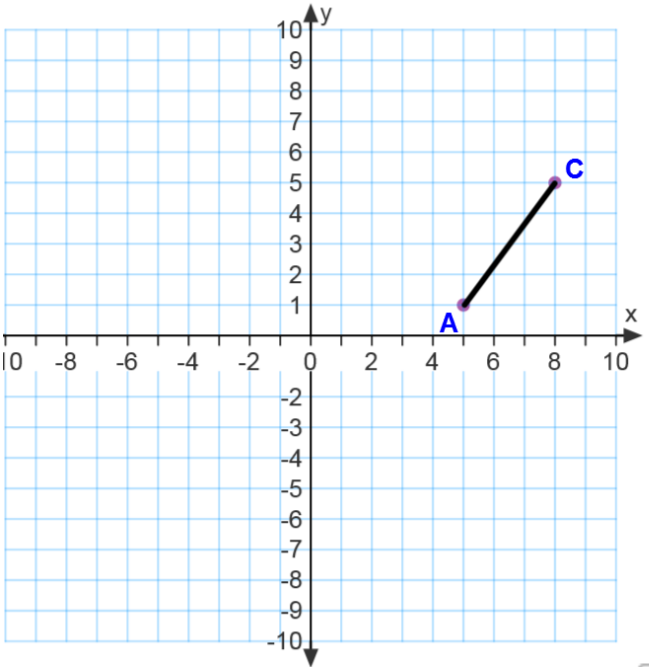


Reflect segment AC over the line y = 2

A(5,1).....A'( )

C(8,5).....C'( )

Lesson 2.2 – Reflections



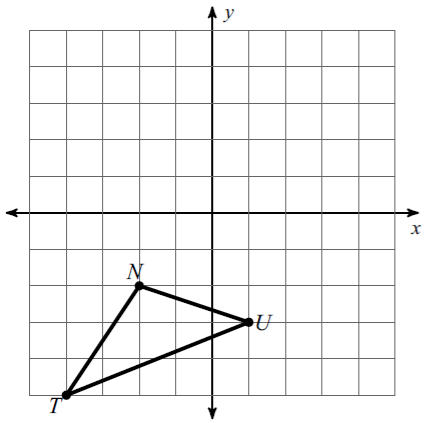
Reflect segment AC over the line y = 2x + 1

A(5,1).....A'( )

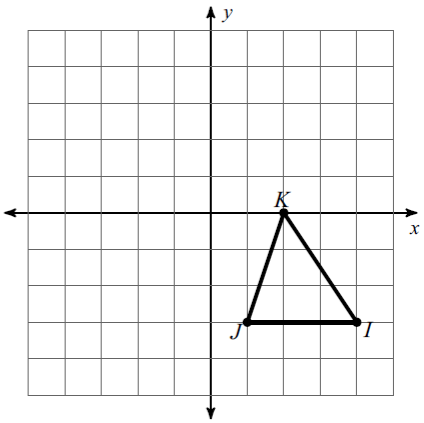
C(8,5).....C'( )

Extra Practice – Draw the indicated reflection.
Be sure to draw the line of reflection if it is not the x or y axis

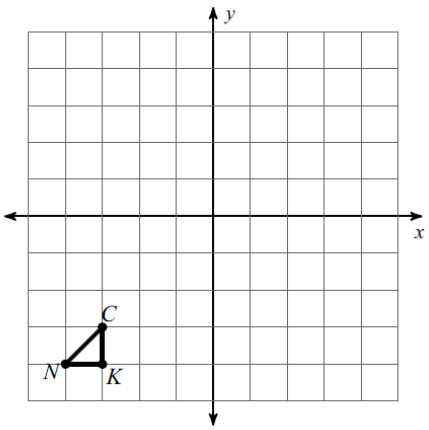
1) reflection across the x-axis



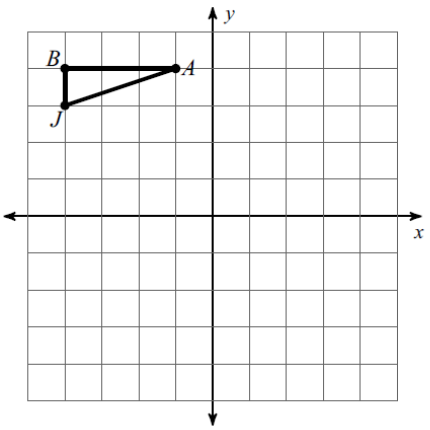
2) reflection across the y-axis



3) reflection across $x = -4$

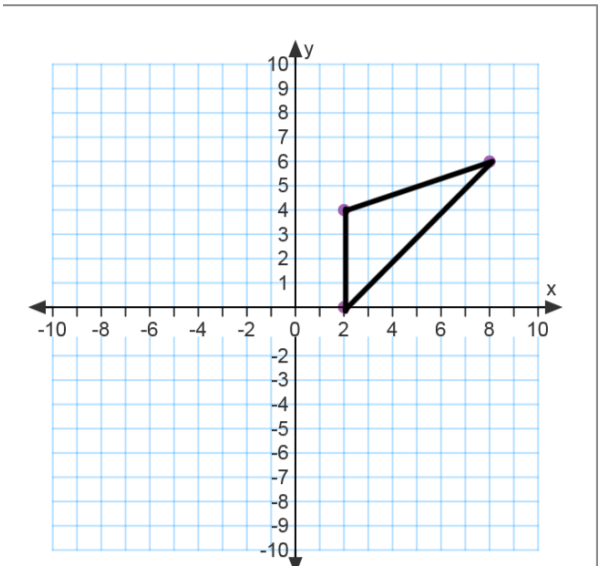


4) reflection across $y = x$



Lesson 2.3 – Rotations

Rotating around the origin (0,0).



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (-y , x)

A(2,4).....A'( )

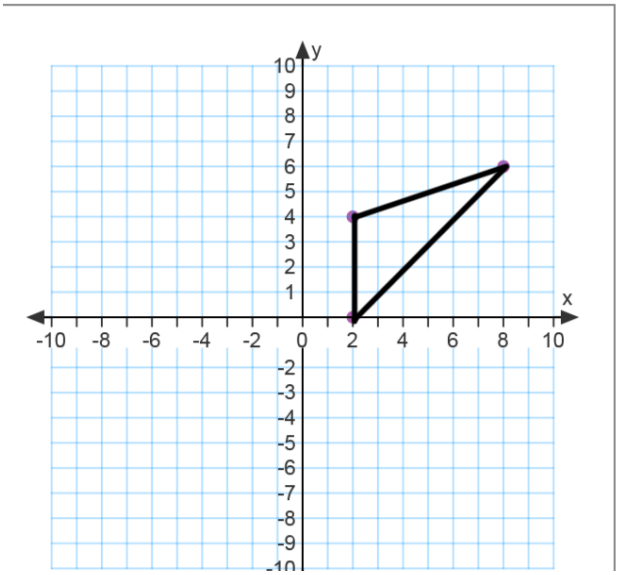
B(2,0).....B'( )

C(8,6).....C'( )

Direction of Rotation: _____

Degree of Rotation: _____

Rotating around the origin (0,0).



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (-x , -y)

A(2,4).....A'( )

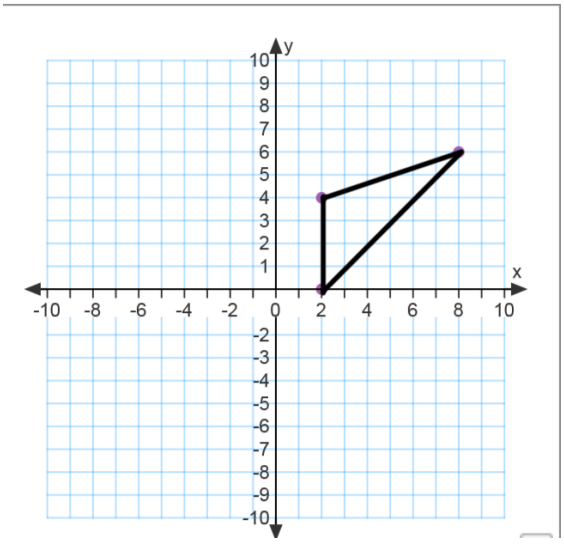
B(2,0).....B'( )

C(8,6).....C'( )

Direction of Rotation: _____

Degree of Rotation: _____

Rotating around the origin (0,0).



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (x , -y)

A(2,4).....A'( )

B(2,0).....B'( )

C(8,6).....C'( )

Direction of Rotation: _____

Degree of Rotation: _____