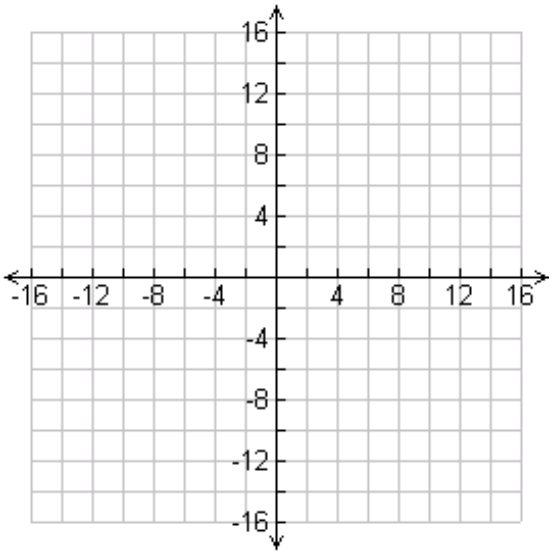
Problem 1 – Reflections

On page 1.2, △*ABC* is shown along with the reflection across the *x*-axis, △*A'B'C'*. One of the points of △*A'B'C'* is shown. Drag △*ABC* by one of its vertices or a side to see how the points change. Fill in the tables below with the coordinate points.

△*ABC*

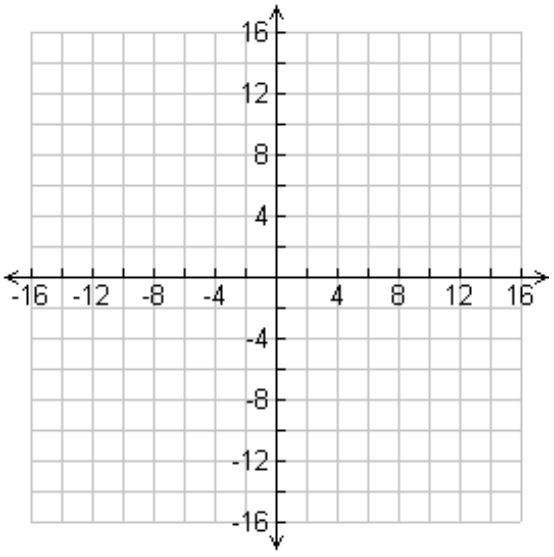
Pre-image:	**Reflection over the *x*-axis:**
A _____	*A'* _____
B _____	*B'* _____
C _____	*C'* _____



On page 1.3, △*DEF* is shown along with the reflection across the *y*-axis, △*D'E'F'*. One of the points of △*D'E'F'* is shown. Drag △*DEF* by one of its vertices or a side to see how the point changes. Sketch the triangles below and then fill in all the points below.

△*DEF*

Pre-image:	**Reflection over the *x*-axis:**
D _____	*D'* _____
E _____	*E'* _____
F _____	*F'* _____



Summarize:

Reflecting a point (*x*, *y*) over the *x*-axis: (*x*, *y*) → _____

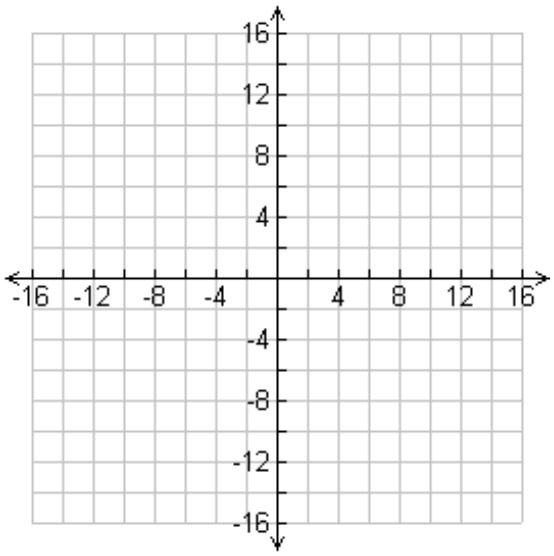
Reflecting a point (*x*, *y*) over the *y*-axis: (*x*, *y*) → _____

Problem 2 – Rotations

On pages 2.1 through 2.3, quadrilateral are rotated around the origin. As with the previous problem, move the original quadrilateral around to see the relationship between the points of the original quadrilateral to its rotation. Fill in the tables below.

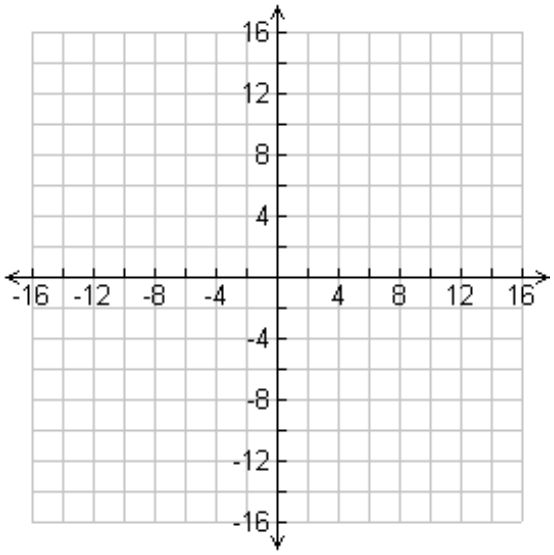
Quadrilateral *ABCD*

Pre-image:	**Rotation 90° counterclockwise about the origin:**
A _____	*A′* _____
B _____	*B′* _____
C _____	*C′* _____
D _____	*D′* _____



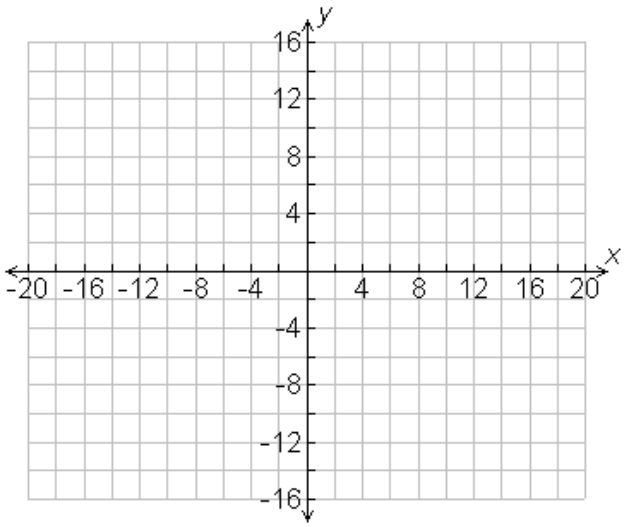
Quadrilateral *EFGH*

Pre-image:	**Rotation 180° counterclockwise about the origin:**
E _____	*E′* _____
F _____	*F′* _____
G _____	*G′* _____
H _____	*H′* _____



Quadrilateral *JKLM*

Pre-image:	**Rotation 270° counterclockwise about the origin:**
J _____	*J'* _____
K _____	*K'* _____
L _____	*L'* _____
M _____	*M'* _____



Summarize:

Rotating a point (x, y) 90° counterclockwise about the origin: $(x, y) \rightarrow$ _____

Rotating a point (x, y) 180° counterclockwise about the origin: $(x, y) \rightarrow$ _____

Rotating a point (x, y) 270° counterclockwise about the origin: $(x, y) \rightarrow$ _____