Reflections on the Plane

**Geometry**

**Unit 1 Line Master 9a**

**Individually:**Draw a quadrilateral as an initial shape. Place it fully in the first quadrant of the coordinate plane.

Reflect the shape into each of the other quadrants of the plane   
using the *x*-axis and *y*-axis as lines of reflection. After each reflection, record the coordinates of the vertices of the image. Note how the original coordinates changed.

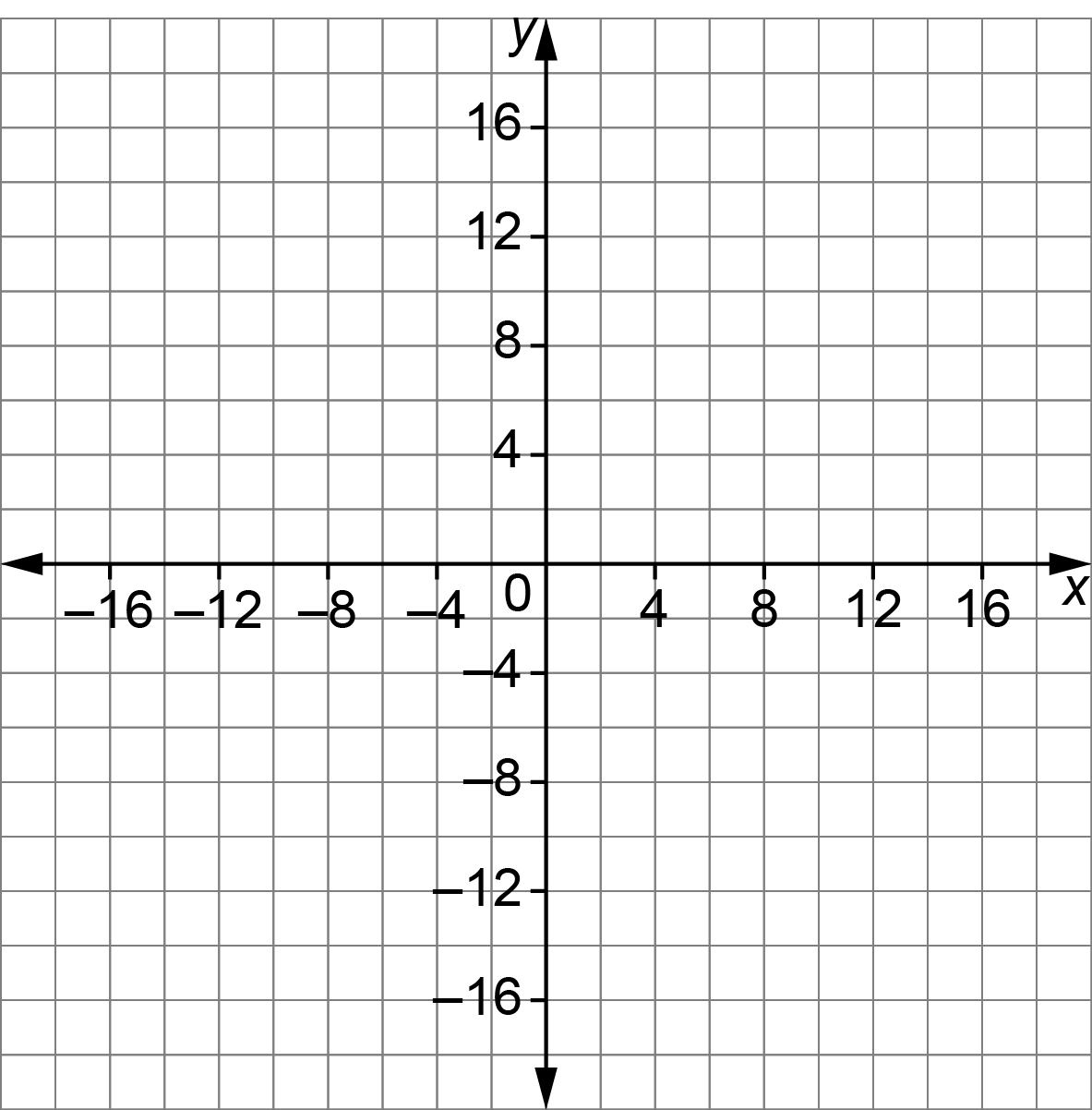
**As a group:**   
Take turns showing each other your initial shape.   
Try to predict what the coordinates of the vertices of the image will be for your group members’ reflections.

* What patterns do you notice as you reflect the shapes   
  in the *x*-axis and *y*-axis?
* Why do you think these patterns exist?
* Can you create any general rules about reflections   
  in the *x*-axis and *y*-axis?

Reflections on the Plane (cont’d)

**Geometry**

**Unit 1 Line Master 9b**

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