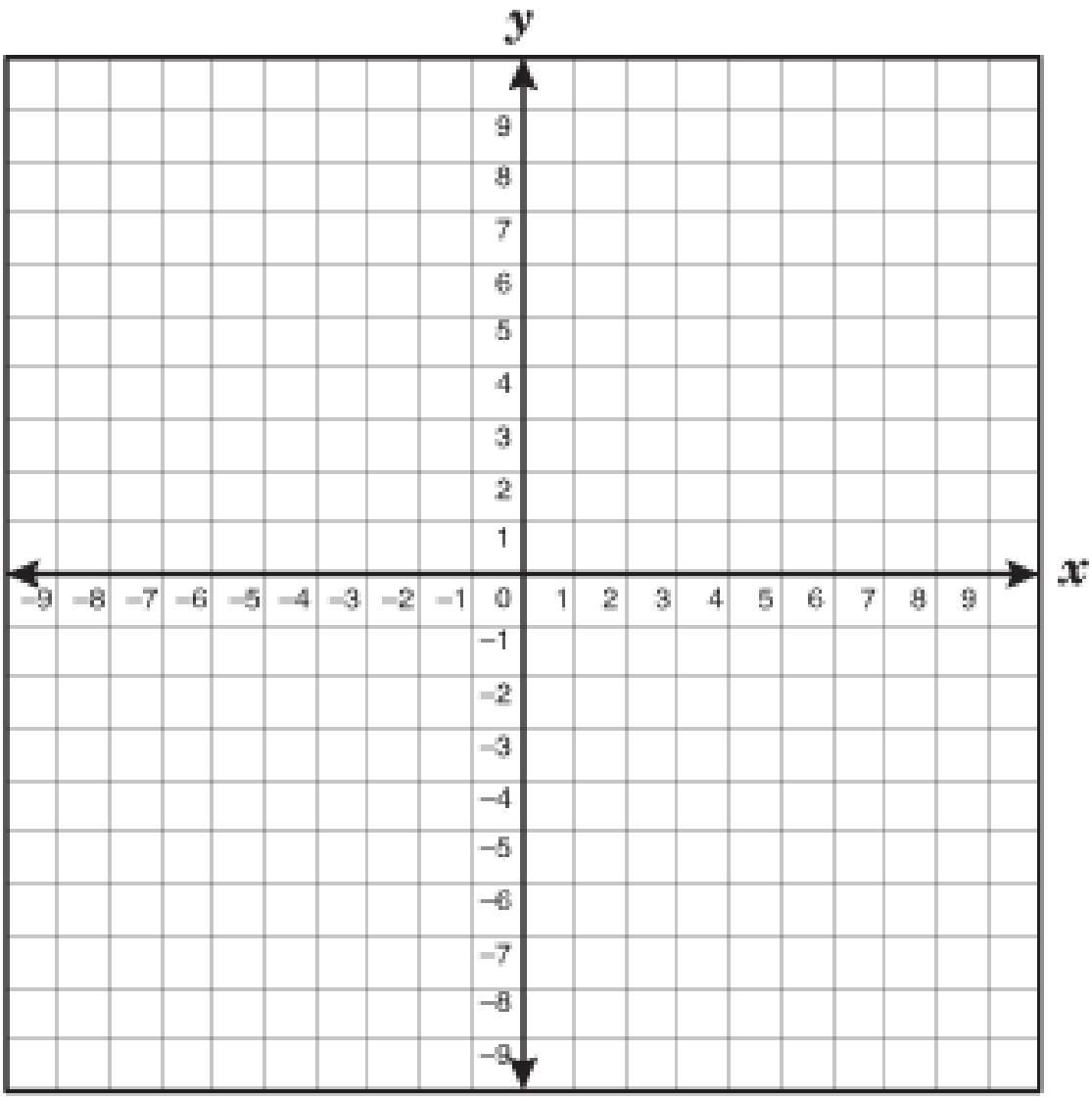


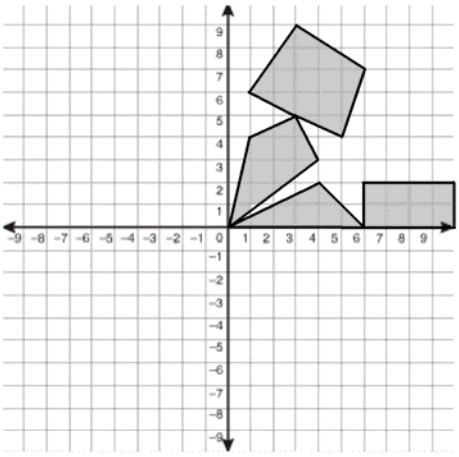

Snowflakes have a symmetrical shape that often follows a simple pattern that is replicated to form the full shape that you see.

**Problem 1** - Graph the following points to make a design in the First Quadrant:

(10,0), (10,2), (6,2), (6,0), (4,2), (0,0), (4,3), (3,5), (5,4), (6,7), (3,9), (1,6), (3,5), (1,4), (0,0)

**Problem 2** - Connect the points with line segments in the order given.

**Problem 3** - Reflect the pattern that you drew into the Second Quadrant, then complete the pattern in Quadrants Three and Four to form the full snowflake shape!



**Problem 1 and 2** -

**Problem 3 -** Students may either place 'mirrors along the X and Y axis and redraw the shape in the First Quadrant, or use the following symmetry idea: To reflect the figure into Quadrant Two, plot the points in Quadrant One with the sign of the x coordinates replaced by their negative : (x,y) becomes (-x, y). For Quadrant Three use (x,y) becomes (-x,-y) and for Quadrant Four (x,y) becomes (x,-y). The full figure is shown below: