

Name \_\_\_\_\_

Date \_\_\_\_\_

### Open-ended Task: Geometry Chapter 9

**Directions:**

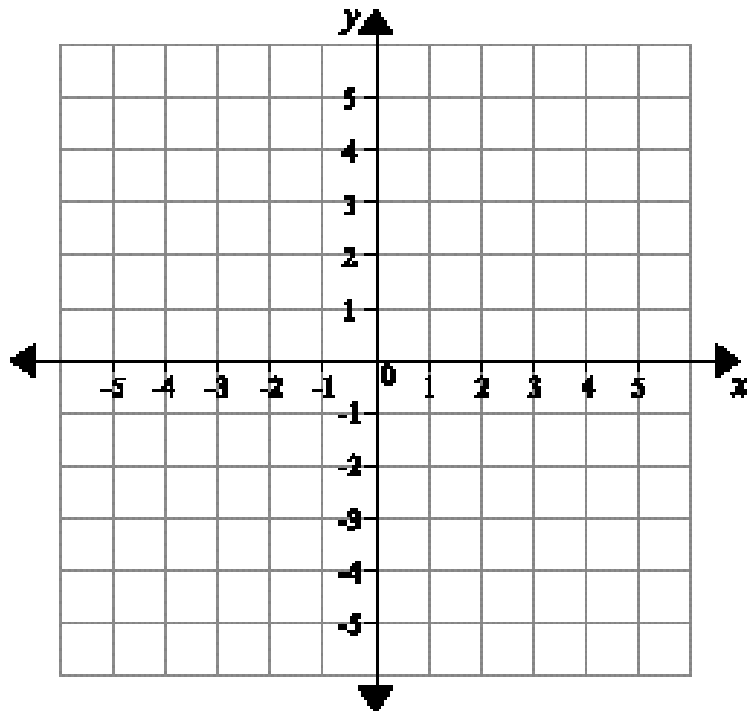
To receive full credit you must do the following:

1. Show OR describe each step of your work, even if you did it in your head (“mental math”) or used a calculator,  
AND
2. Write an explanation stating the mathematical reason(s) why you chose each of your steps.

**Question:** Quadrilateral ABCD has vertices A(-2,1), B(-3,1), C(1,3), and D(0,-2)

A. Find the vertices A',B',C', and D' of the image after a dilation with a scale factor of 2.

B. Graph the image and preimage.



**C.** Show the image matrix after reflecting  $A'$ ,  $B'$ ,  $C'$ , and  $D'$  in line with  $y = x$ .

**D.** Now rotate the reflection 270 degrees. Find the new image matrix.