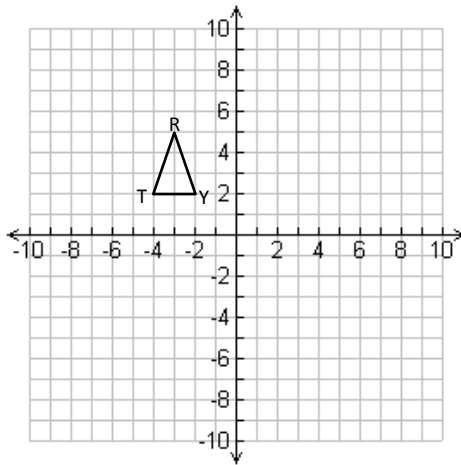


Name: \_\_\_\_\_

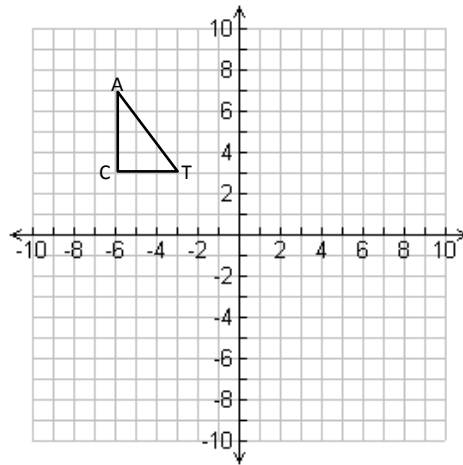
### Geometry Review

You must label the vertices of your image! All rotations are around the origin.

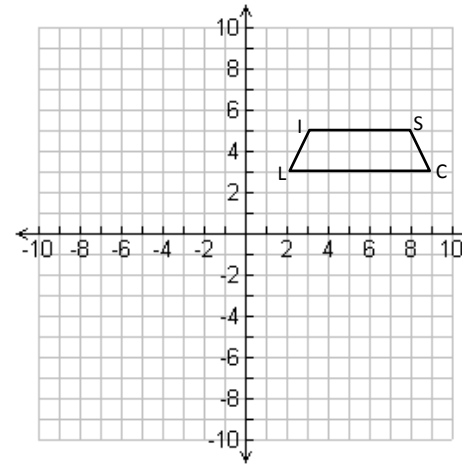
1)  $(x, y) \rightarrow (x+7, y-5)$



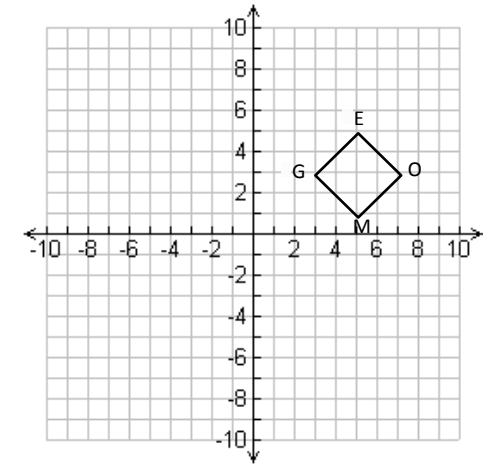
2) Reflect across the line  $y = -1$



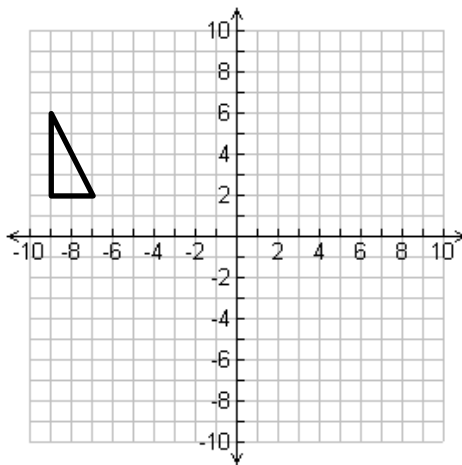
3) Rotate  $180^\circ$



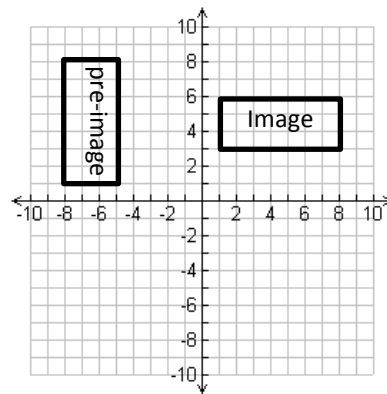
4) Reflect across y-axis, then across  $y = x$



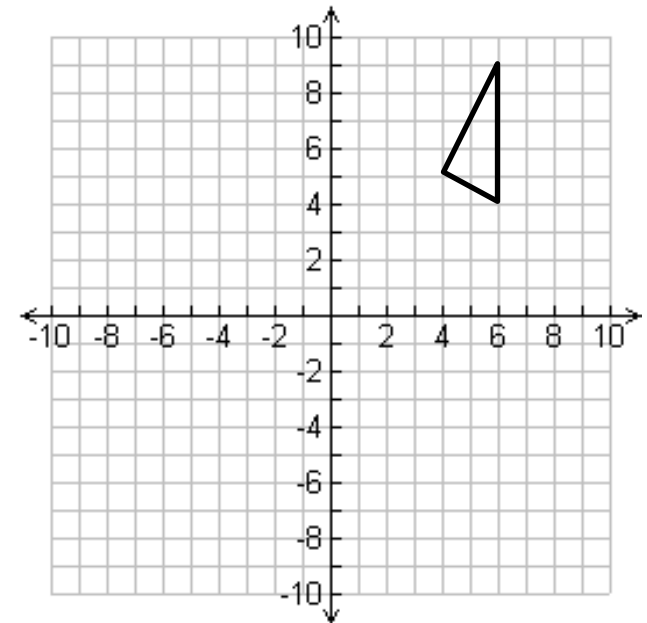
5) A triangle was rotated  $90^\circ$  clockwise, and the image is shown below. Draw the original figure.



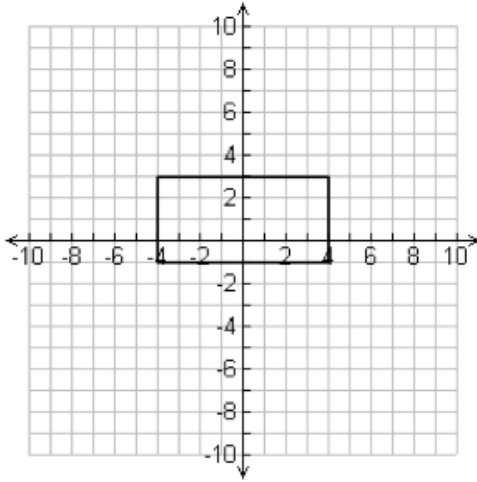
6) What steps would take the pre-image to the image?



7) A triangle was rotated  $270^\circ$  counterclockwise, then translated two units down. Then it was rotated  $90^\circ$  clockwise and translated two units up. The image is shown. Draw the original figure.

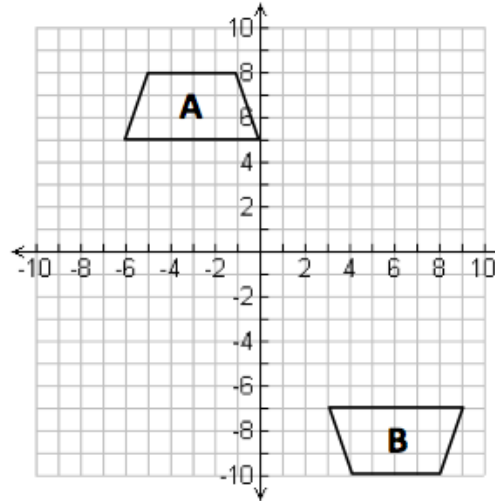


8) Which transformations would map the rectangle onto itself? Select all that apply.



- A. Reflection across the x-axis
- B. Reflection across the y-axis
- C. Reflection across the line  $x = 1$
- D. Reflection across the line  $y = 1$
- E.  $180^\circ$  rotation around the origin
- F.  $180^\circ$  rotation around  $(0, 1)$
- G.  $360^\circ$  rotation around the origin
- H. Translation 4 units up, then a reflection across the line  $y = 3$
- I. Translation 1 unit down, then a reflection across the x-axis
- J.  $180^\circ$  rotation around the origin, then a translation of 2 units up.

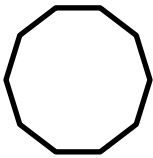
9) Each sequence of transformations maps trapezoid A onto trapezoid B. Fill in the blanks.



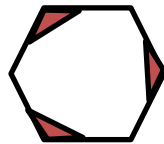
- a) Reflection across the x-axis followed by the translation  $(x, y) \rightarrow$  \_\_\_\_\_
- b)  $180^\circ$  rotation around the origin followed by the translation  $(x, y) \rightarrow$  \_\_\_\_\_
- c)  $180^\circ$  rotation around the point  $(-3, 5)$  followed by the translation  $(x, y) \rightarrow$  \_\_\_\_\_
- d) Reflection across the line \_\_\_\_\_ followed by a translation of 9 units to the right
- e) Reflection across the line \_\_\_\_\_ followed by a reflection across the line \_\_\_\_\_

Give the smallest degree of rotation so that the figure maps onto itself. Each figure is **regular**.

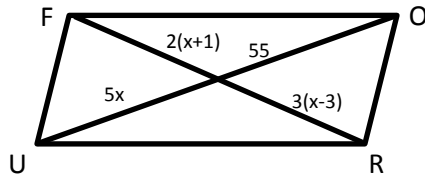
10)



11)

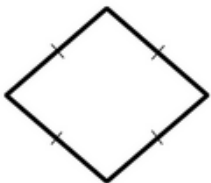


12) FOUR is a parallelogram. Find FR.

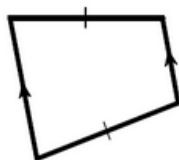


Give the most specific name for each quadrilateral given only the information shown.

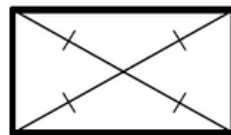
13)



14)



15)



**16) Challenge:** Find all lines of symmetry. Write the equation for each line in slope-intercept form.

