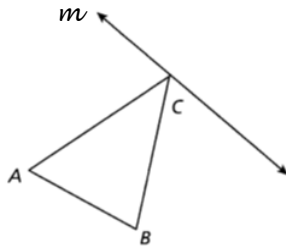
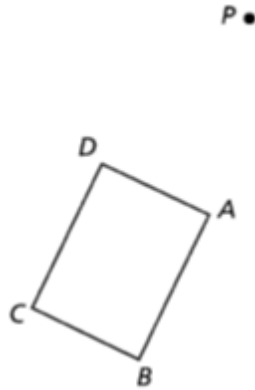


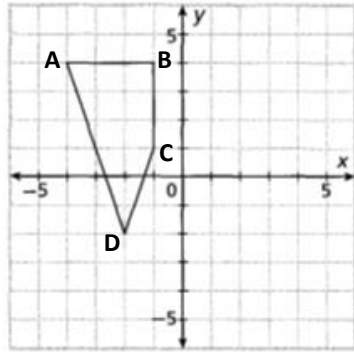
1. Reflect the preimage below over line  $m$ .



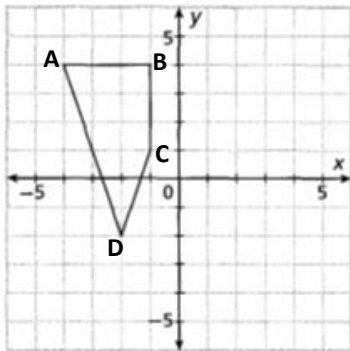
2. Rotate the preimage  $80^\circ$  counter-clockwise about P.



3.  $R_{0,270^\circ CCW}(ABCD)$



4.  $R_{y=x}(ABCD)$



5. Find the treasure.....

You start at A(-3,5). The treasure map has the following instructions.

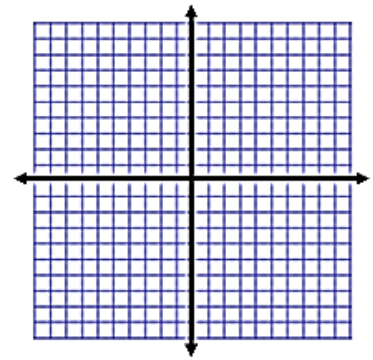
- (a) Translate  $(x,y) \rightarrow (x-6, y-3)$       (b) Reflect over the x axis  
 (c) Rotate it  $270^\circ$  CCW about the origin      (d) Reflect it over the  $y = x$  line

What ordered pair represents the location of the treasure? \_\_\_\_\_

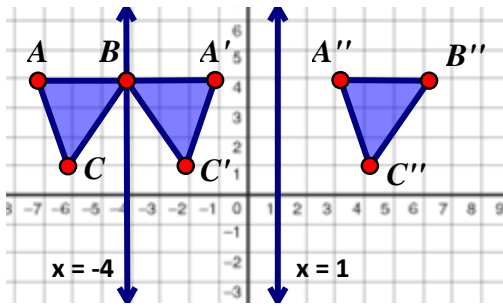
Would would be the correct way to label this ordered pair to reflect the number of transformtions that have occurred? \_\_\_\_\_

Write the composition of transformations above using the correct notation.

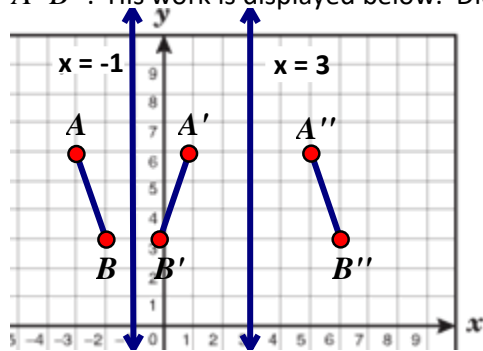
\_\_\_\_\_



6. Sam is asked to perform the following composite transformation:  $R_{x=-4} \circ R_{x=1}(\triangle ABC)$ . The resultant translation is  $\triangle A''B''C''$ . His work is displayed below. Did he do it correctly? Explain.

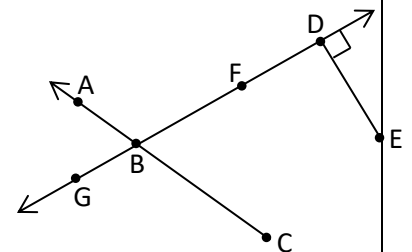


7. Jordan is asked to perform the following composite transformation:  $R_{x=3} \circ R_{x=-1}(\overline{AB})$ . The resultant translation is  $\overline{A''B''}$ . His work is displayed below. Did he do it correctly?



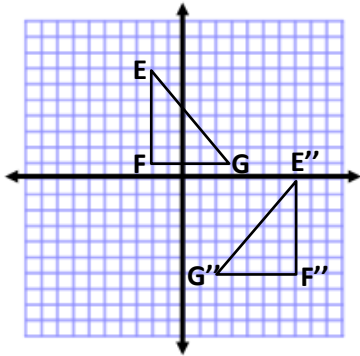
8. Use the figure to the right.

- a. Name the line in two different ways. \_\_\_\_\_  
 b. Name an angle. \_\_\_\_\_  
 c. Name the ray in two different ways. \_\_\_\_\_  
 d. Name two perpendicular objects. (Be careful.) \_\_\_\_\_  
 e. Name a line segment in two different ways. \_\_\_\_\_  
 f. Name three non-collinear points. \_\_\_\_\_



9. Write the following composition of transformations out in words:  $R_{0,270^\circ\text{CCW}} \circ T_{\langle -3,1 \rangle}(\triangle ABC)$ .

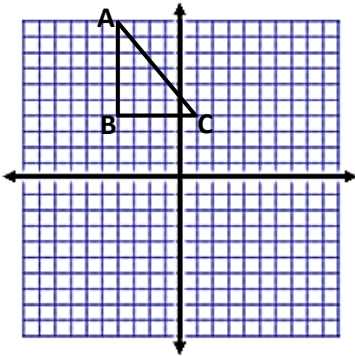
10. Consider the preimage/image below.



a. How many transformations have been done to move the preimage to the image? How do you know?

b. Describe this transformation or composition of transformations completely below using correct notation.

11.  $R_{0,90^\circ\text{CCW}} \circ R_{y=-x}(\triangle ABC)$



12.  $T_{\langle 5,0 \rangle} \circ R_{0,270^\circ\text{CCW}}(\triangle ABC)$

