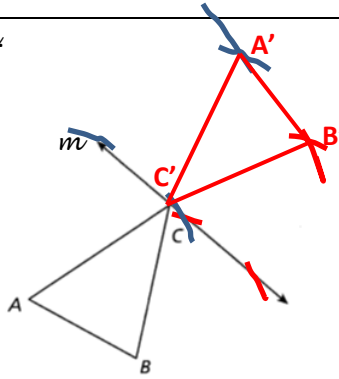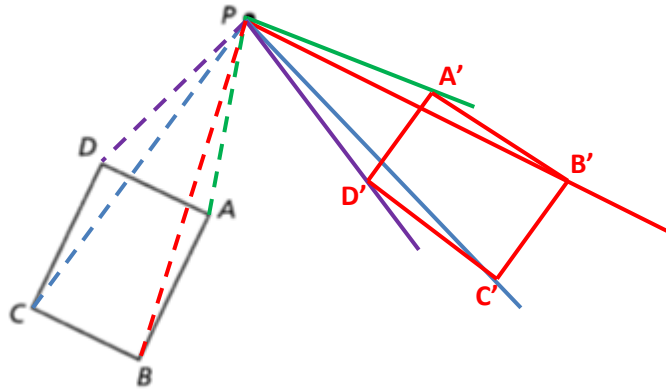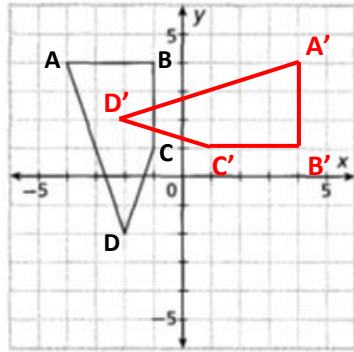1. Reflect the preimage below over line m.

2. Rotate the preimage 80° counter-clockwise about P.

3. $R_{O,270°CCW}(ABCD)$

90° CW (x, y)→ (y, -x)

A (-4, 4)→ (4, 4)

B (-1, 4)→ (4, 1)

C (-1, 1)→ (1, 1)

D (-2, -2)→ (-2, 2)

4. $R_{y=x}(ABCD)$
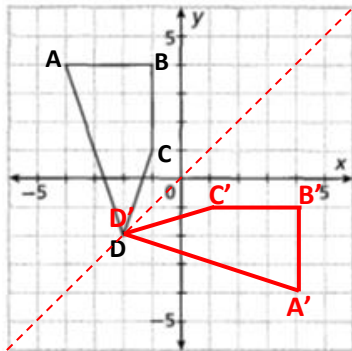
(x, y)→ (y, x)

A (-4, 4)→ (4, -4)

B (-1, 4)→ (4, -1)

C (-1, 1)→ (1, -1)

D (-2, -2)→ (-2, -2)

5. Find the treasure……

You start at A(-3,5). The treasure map has the following instructions.
(a) Translate (x,y) ------- (x - 6, y – 3)   (b) Reflect over the x axis
(c) Rotate it 270˚ CCW about the origin   (d) Reflect it over the y = x line

What ordered pair represents the location of the treasure? ____(9, -2)_____

Would would be the correct way to label this ordered pair to reflect the number of transforamtions that have occurred? _____A''''_____

Write the composition of transformations above using the correct notation.

$$R_{y=x} \circ R_{o,270°CCW} \circ R_{x-axis} \circ T_{<-6, -3>} A(-3, 5)$$

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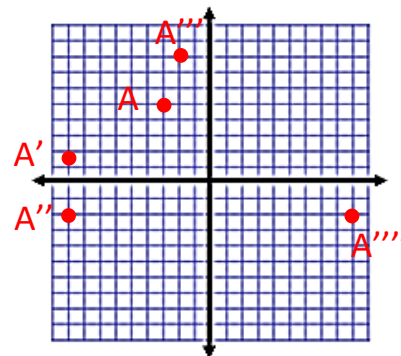
6. Sam is asked to perform the following composite transformation: $R_{x=-4} \circ R_{x=1}(\triangle ABC)$. The resultant translation is $\triangle A''B''C''$. His work is displayed below. Did he do it correctly? Explain.
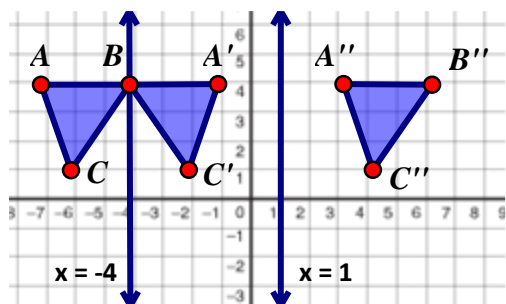
No, he did it in the wrong order

x = -4   x = 1

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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?

x = -1   x = 3
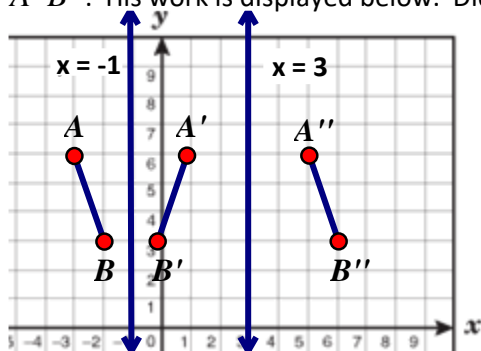
Yes

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8. Use the figure to the right.

a. Name the line in two different ways.   __(VARIES) $\overleftrightarrow{GB}, \overleftrightarrow{FD}, \overleftrightarrow{BD}$

b. Name an angle.   __(VARIES) $\angle GBC$ or $\angle EDF$

c. Name the ray in two different ways.   __$\overrightarrow{CA}, \overrightarrow{CB}$_____
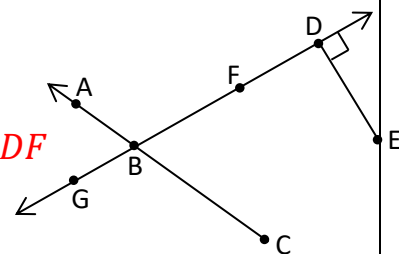
d. Name two perpendicular objects. (Be careful.)   __(VARIES) $\overline{DE} \perp \overleftrightarrow{GB}$__

e. Name a line segment in two different ways.   __$\overline{DE}, \overline{ED}$_____
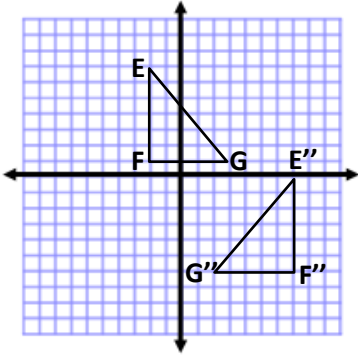
f. Name three non-collinear points.   __(VARIES) G,B,C____

9. Write the following composition of transformations out in words: $R_{O,270°CCW}°T_{<-3,1>}(\triangle ABC)$.

Translate ΔABC left 3 and up 1 then rotate ΔA'B'C' 270° CCW around (0, 0)

10. Consider the preimage/image below.

a. How many transformations have been done to move the preimage to the image? How do you know?
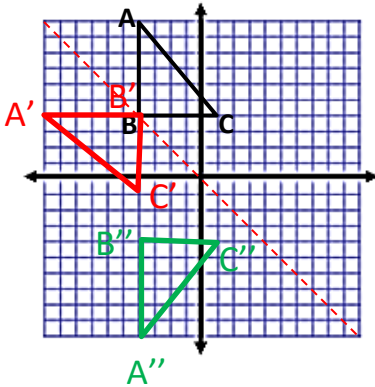
2, the labels have a double prime

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

(others possible) R $_{x = 2}$ ° T$_{<-1, -7>}$ (ΔEFG)

R $_{y-axis}$ ° T$_{<5, -7>}$ (ΔEFG)

11. $R_{O,90°CCW}°R_{y=-x}(\triangle ABC)$

12. $T_{<5,0>}°R_{O,270°CCW}(\triangle ABC)$