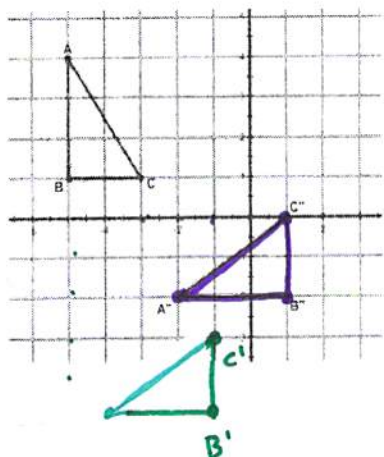


Directions: Describe the sequence of transformations.  
Then, write the rule for the sequence.

$$(-y, x)$$



① Rotate  $90^\circ$  CCW

$$A(-5, 4) \rightarrow A'(-4, -5)$$

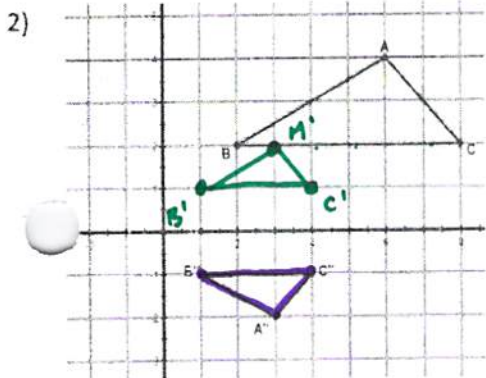
$$B(-5, 1) \rightarrow B'(-1, -5)$$

$$C(-3, 1) \rightarrow C'(-1, -3)$$

② Translate up 3, right 2.

$$\text{Rule: } (x, y) \rightarrow (-y + 2, x + 3)$$

Directions: Describe the sequence of transformations.  
Then, write the rule for the sequence.



① Dilate by S.F of  $\frac{1}{2}$

$$A(6, 4) \rightarrow A'(3, 2)$$

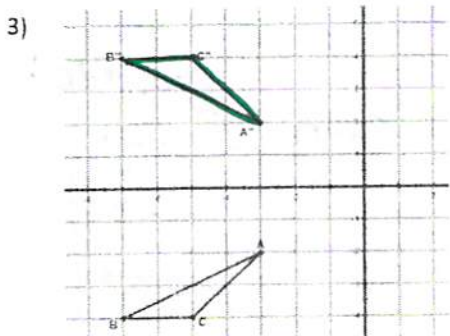
$$B(2, 2) \rightarrow B'(1, 1)$$

$$C(8, 2) \rightarrow C'(4, 1)$$

② Reflect over x-axis.  $(x, -y)$

$$\text{rule: } (x, y) \rightarrow \left(\frac{1}{2}x, -\frac{1}{2}y\right)$$

Directions: Describe the sequence of transformations.  
Then, write the rule for the sequence.



① Reflect over x-axis.  $(x, -y)$

$$A(-3, -2) \rightarrow A'(-3, 2)$$

$$B(-7, -4) \rightarrow B'(-7, 4)$$

$$C(-5, -4) \rightarrow C'(-5, 4)$$

② Rotate  $360^\circ$  OR dilate by SF 1.

$$\text{Rule: } (x, y) \rightarrow (x, -y)$$

Directions: Describe the sequence of transformations using the given rules.

4)  $(x, y) \rightarrow (x, -y) \rightarrow (-y, x)$

① Ref. over x axis    ② Ref. over  $y=x$ .

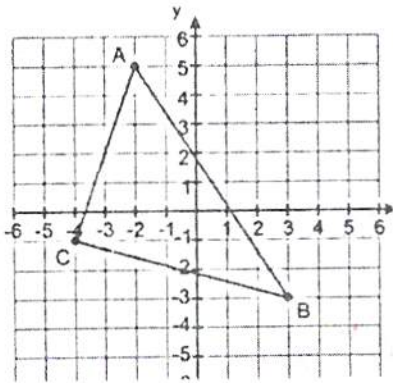
5)  $(x, y) \rightarrow (-y, x) \rightarrow (-y, x-2)$

① Rotate  $90^\circ$  CCW    ② shift 2 units down.

6)  $(x, y) \rightarrow (x, 3y) \rightarrow (3y, x)$

① Vertical stretch S.F of 3.    ② Ref. over  $y=x$ .

Directions: Describe how to map the image onto itself using the given number of transformations.



7) One transformation

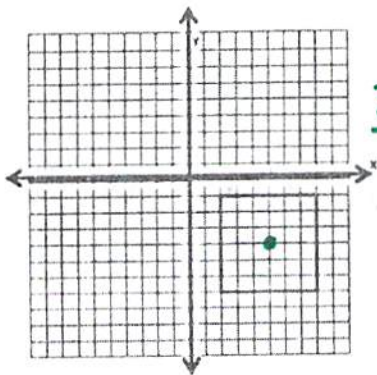
Rotate  $360^\circ$

8) Two transformations

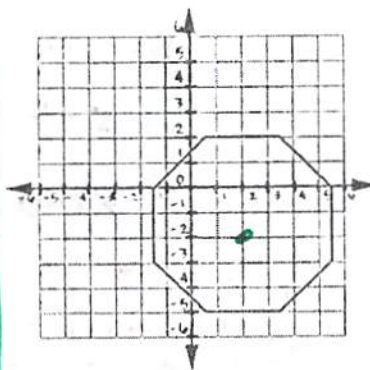
-translate left 3.  
-translate right 3.

Directions: Identify four possible rotations that will map the regular polygon onto itself.

9)



10) Rotate:  
 $\frac{360}{4} = 90^\circ$   
 $180^\circ$   
 $270^\circ$   
 $360^\circ$



Rotate:  
 $\frac{360}{8} = 45^\circ$   
 $90^\circ$   
 $135^\circ$   
 $180^\circ$