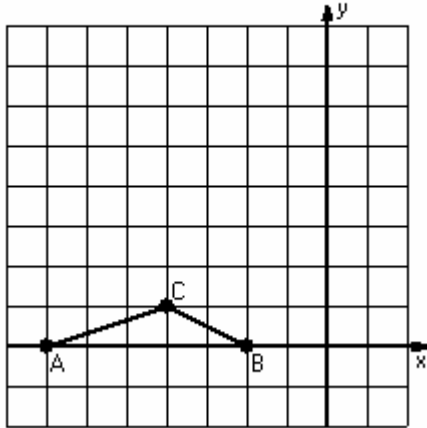


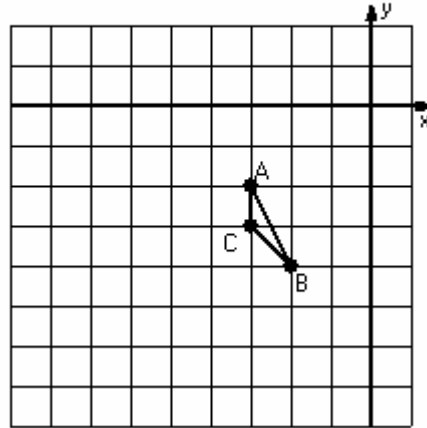
## Three-Step Transformations (J)

Instructions: Transform each triangle three times using the instructions in the order given.  
Draw and label each transformation.

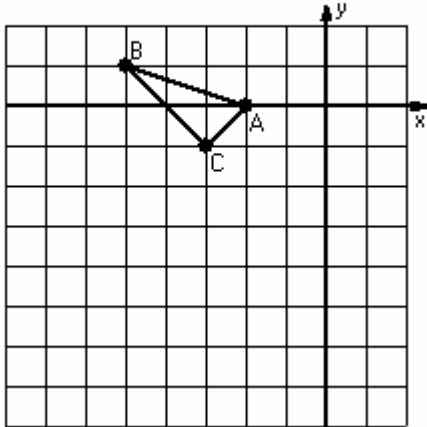
- 1) Translation (1,0)  
Rotation  $180^\circ$ , center R(-4,1)  
Reflection  $y = 3$



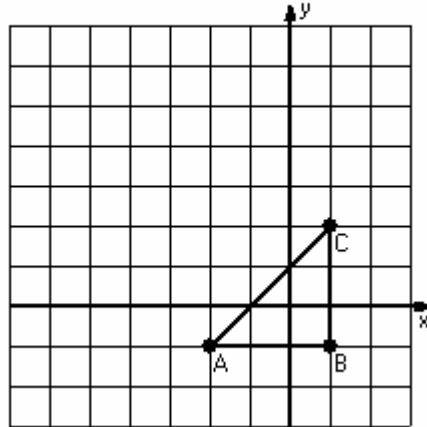
- 2) Dilation scale = 3, center D(-1,-3)  
Reflection  $x = -6$   
Translation (5,1)



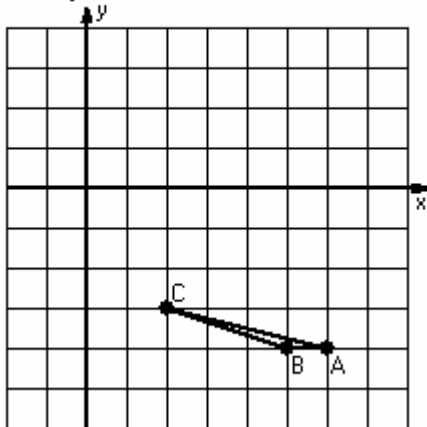
- 3) Reflection  $y = -2$   
Translation (0,-2)  
Rotation  $180^\circ$ , center R(-3,-3)



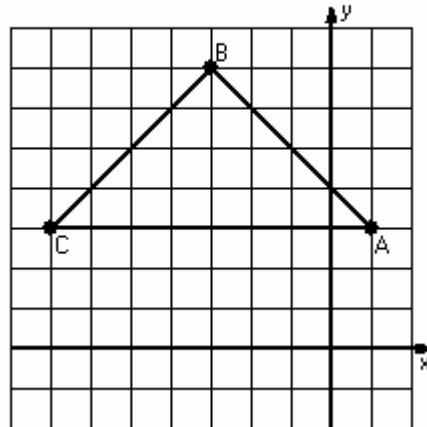
- 4) Dilation scale =  $1/3$ , center D(1,5)  
Rotation  $90^\circ$  counterclockwise, center R(0,0)  
Reflection  $x = -1$



- 5) Rotation  $180^\circ$ , center R(4,-2)  
Translation (-3,0)  
Reflection  $y = 1$



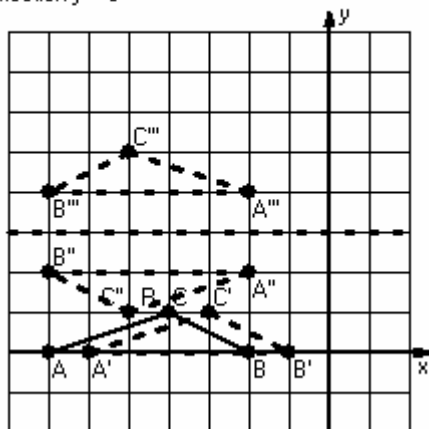
- 6) Dilation scale =  $1/4$ , center D(-3,3)  
Rotation  $90^\circ$  clockwise, center R(-3,1)  
Reflection  $x = -2$



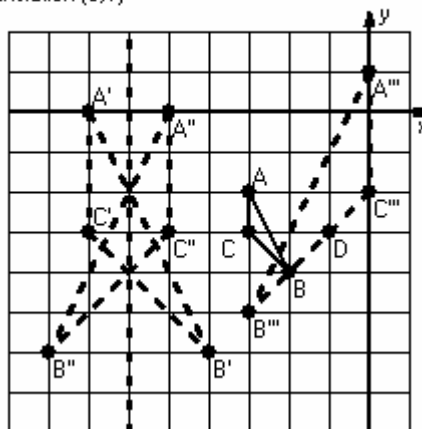
## Three-Step Transformations Answer (J)

Instructions: Transform each triangle three times using the instructions in the order given.  
Draw and label each transformation.

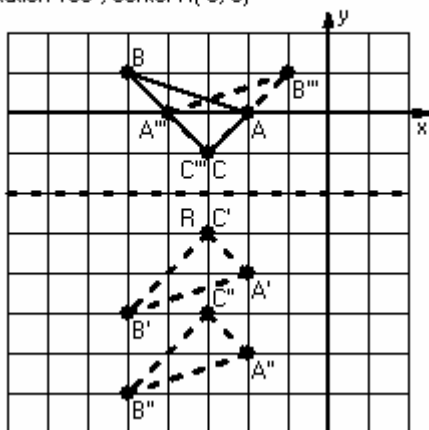
- 1) Translation (1,0)  
Rotation  $180^\circ$ , center R(-4,1)  
Reflection  $y = 3$



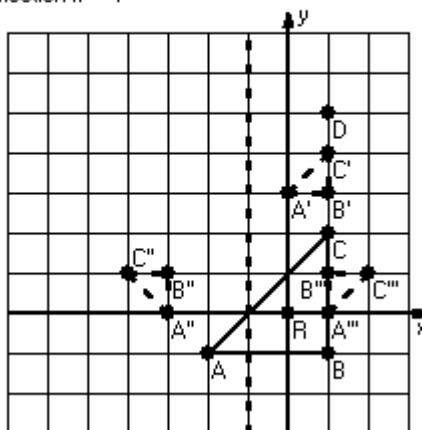
- 2) Dilation scale = 3, center D(-1,-3)  
Reflection  $x = -6$   
Translation (5,1)



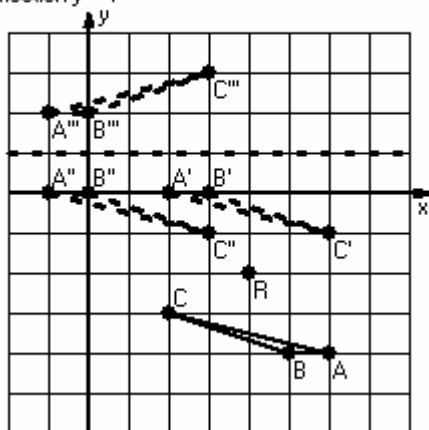
- 3) Reflection  $y = -2$   
Translation (0,-2)  
Rotation  $180^\circ$ , center R(-3,-3)



- 4) Dilation scale = 1/3, center D(1,5)  
Rotation  $90^\circ$  counterclockwise, center R(0,0)  
Reflection  $x = -1$



- 5) Rotation  $180^\circ$ , center R(4,-2)  
Translation (-3,0)  
Reflection  $y = 1$



- 6) Dilation scale = 1/4, center D(-3,3)  
Rotation  $90^\circ$  clockwise, center R(-3,1)  
Reflection  $x = -2$

