

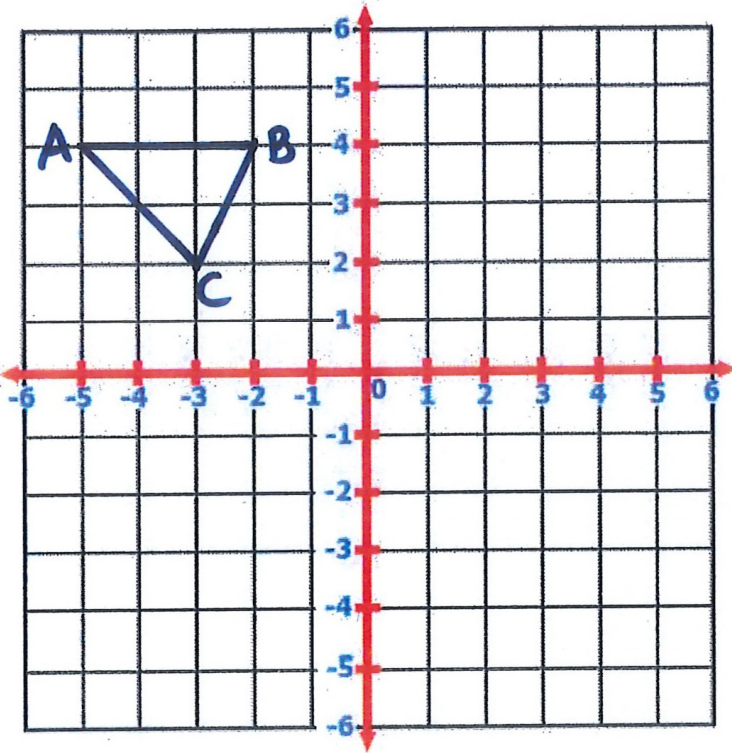
# TRANSFORMATIONS: Translation (vectors) *Date:*

*Name:*

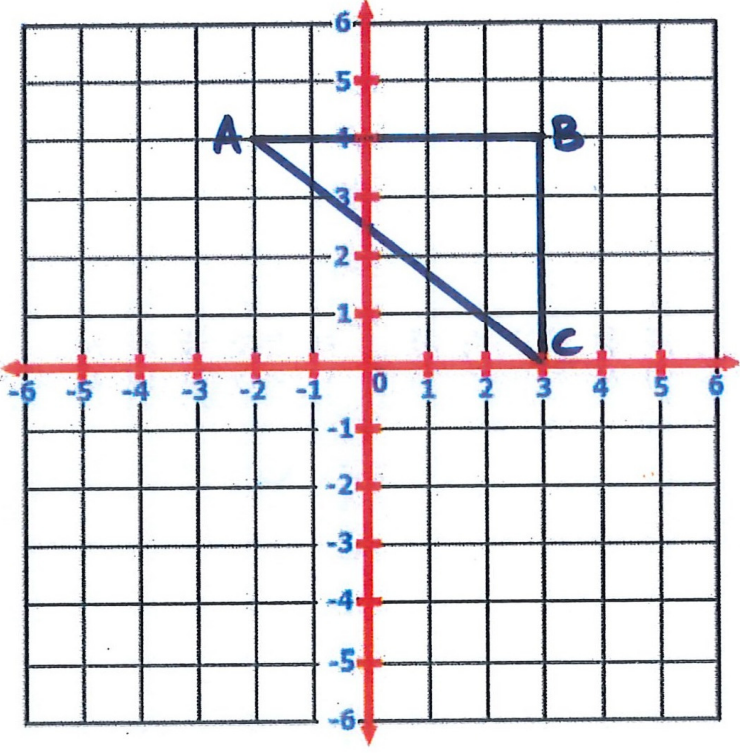
Translate each shape as indicated. Label each image.

<http://www.learnersgrid.com>

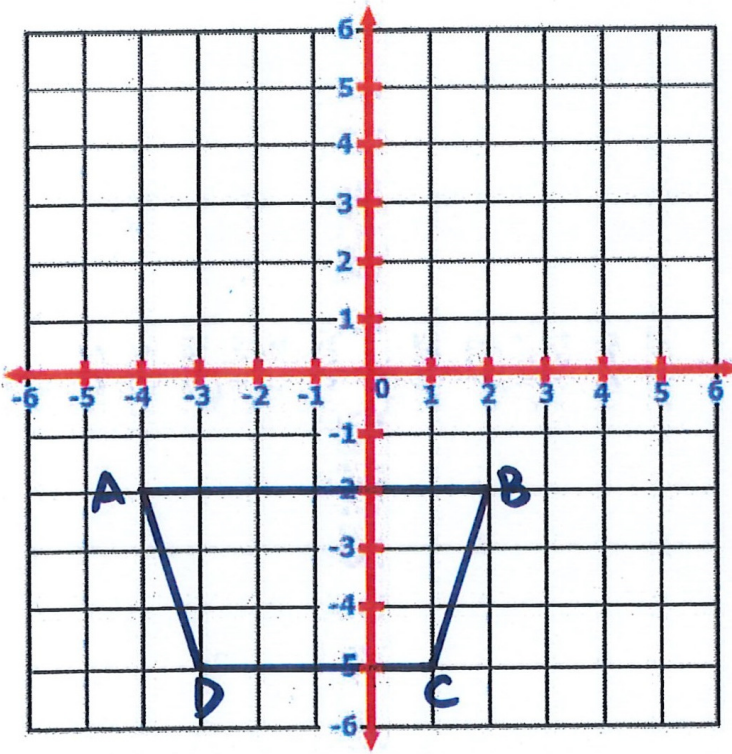
[1] Translate the shape by the vector  $\begin{pmatrix} 1 \\ -1 \end{pmatrix}$ .  
Label the image.



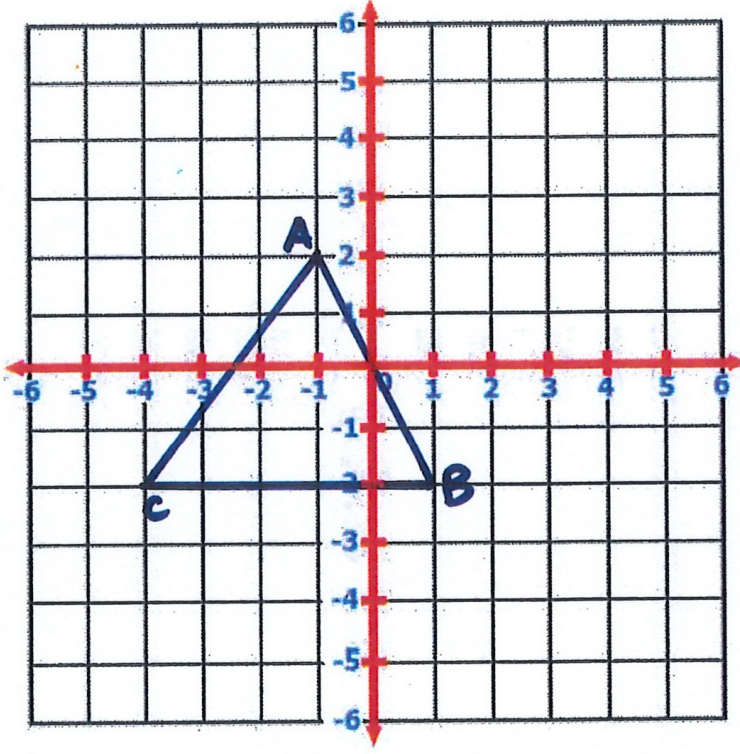
[2] Translate the shape by the vector  $\begin{pmatrix} 2 \\ -2 \end{pmatrix}$ .  
Label the image.



[3] Translate the shape by the vector  $\begin{pmatrix} 2 \\ 1 \end{pmatrix}$ .  
Label the image.



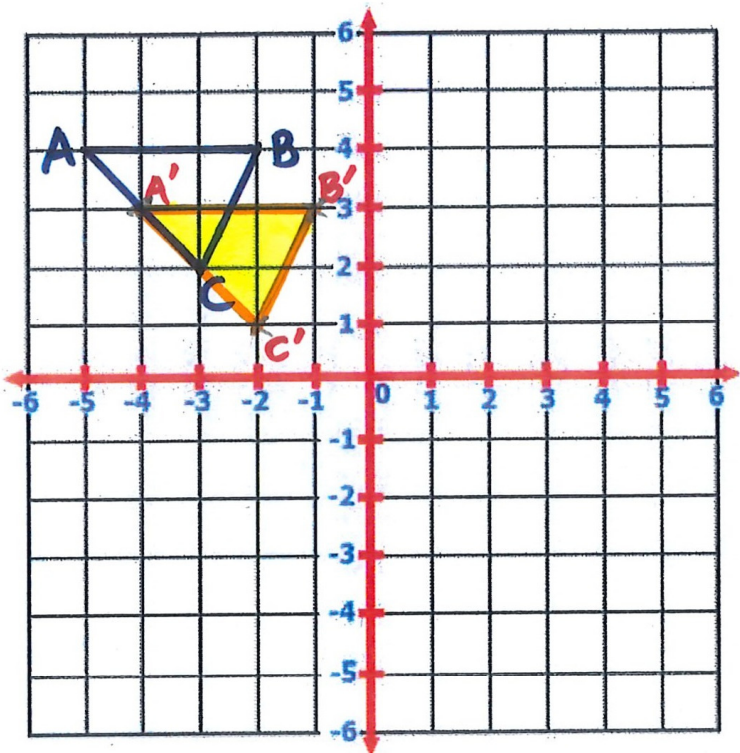
[4] Translate the shape by the vector  $\begin{pmatrix} -1 \\ 2 \end{pmatrix}$ .  
Label the image.



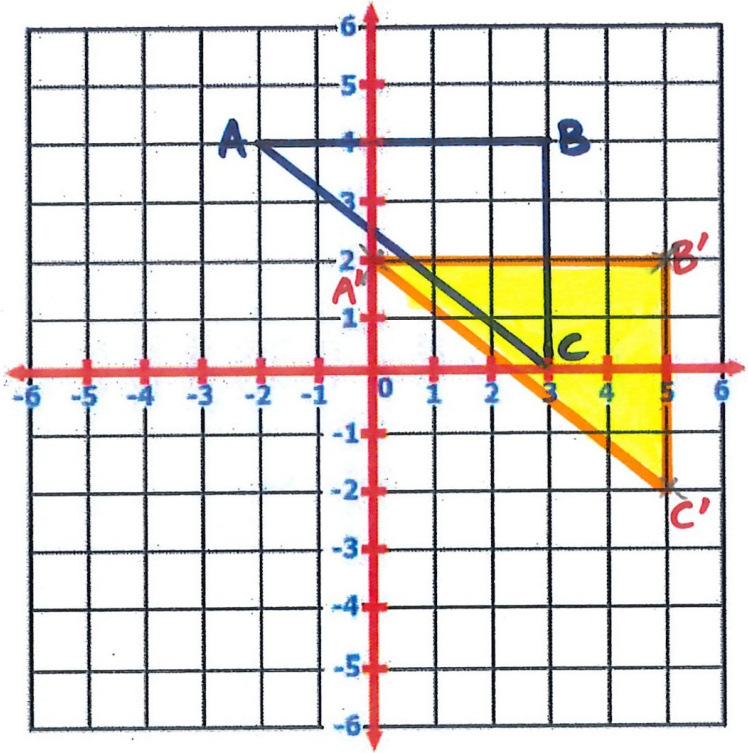
Translate each shape as indicated. Label each image.

# SOLUTIONS

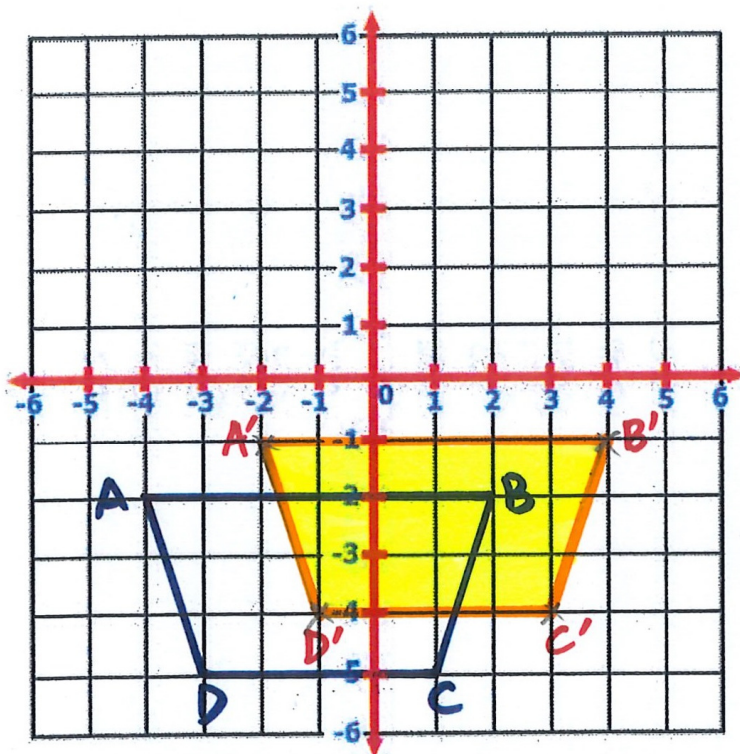
**[1]** Translate the shape by the vector  $\begin{pmatrix} 1 \\ -1 \end{pmatrix}$ .  
Label the image.



**[2]** Translate the shape by the vector  $\begin{pmatrix} 2 \\ -2 \end{pmatrix}$ .  
Label the image.



**[3]** Translate the shape by the vector  $\begin{pmatrix} 2 \\ 1 \end{pmatrix}$ .  
Label the image.



**[4]** Translate the shape by the vector  $\begin{pmatrix} -1 \\ 2 \end{pmatrix}$ .  
Label the image.

