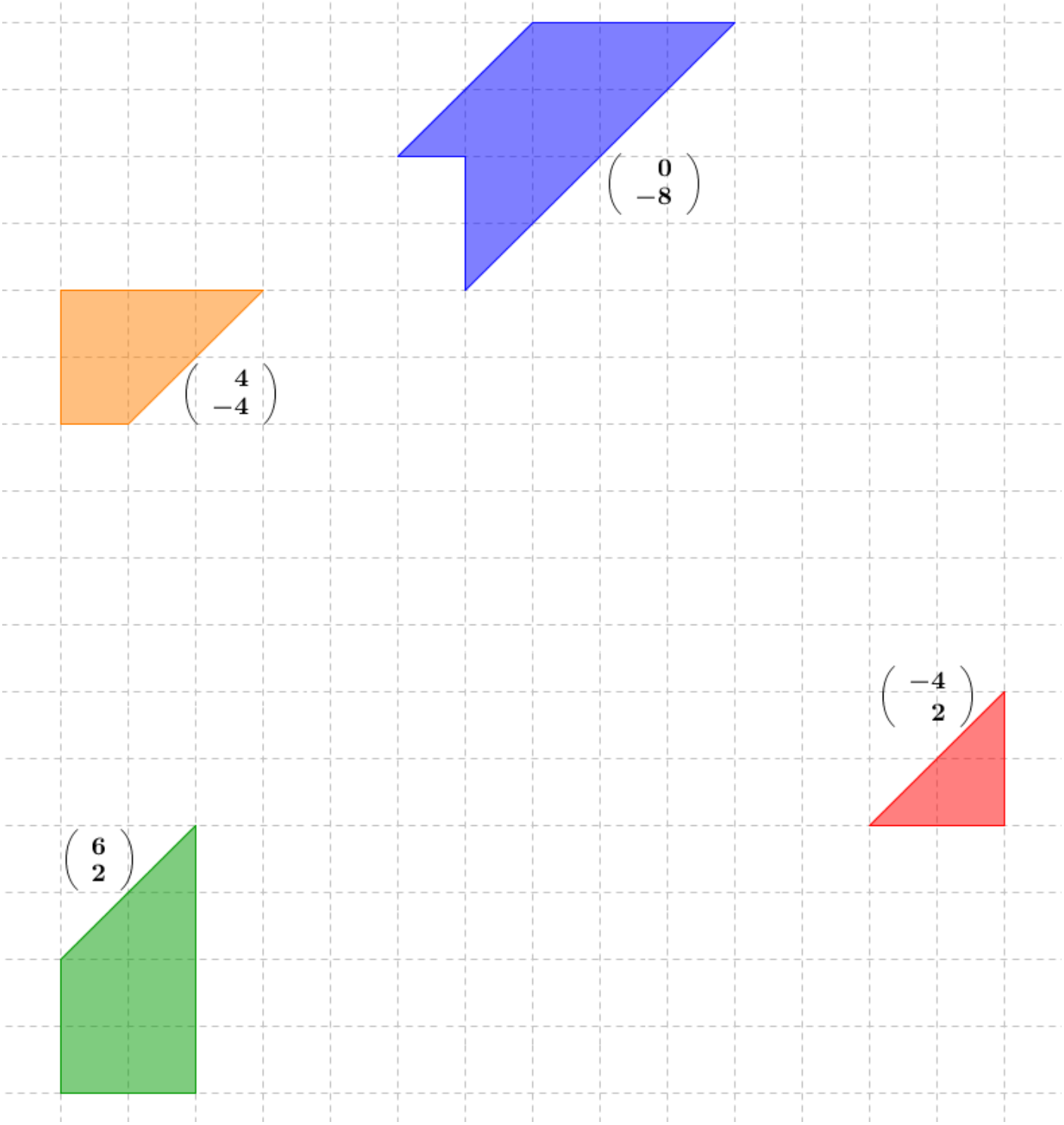
Translation

Translate each shape by following the instructions in the vector beside it.

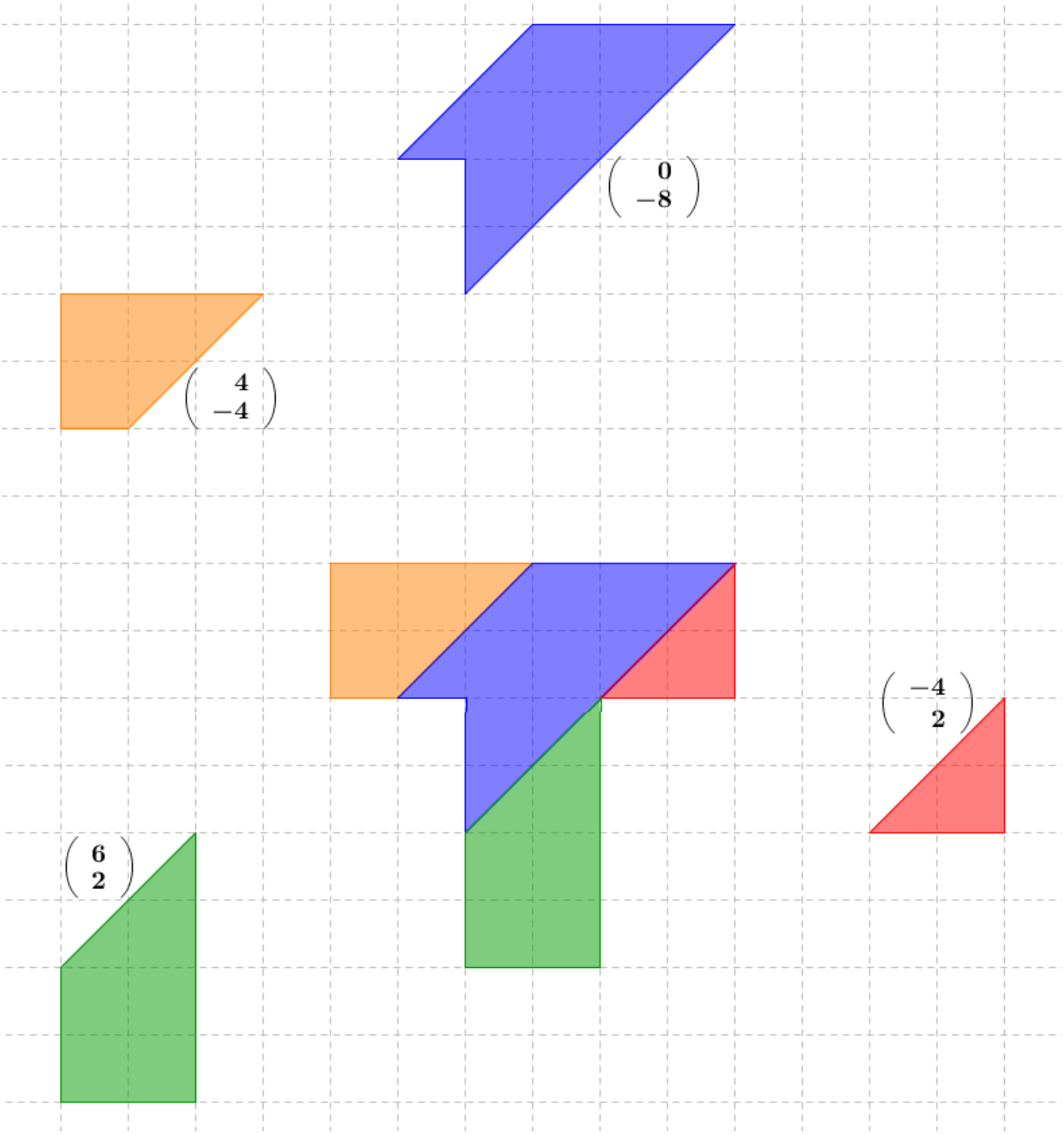


Extension: What translation vector would be required to return each shape to its original position?

Shape	**Green**	**Orange**	**Blue**	**Red**
Original Translation	$\begin{bmatrix} 6 \\ 2 \end{bmatrix}$	$\begin{bmatrix} 4 \\ -4 \end{bmatrix}$	$\begin{bmatrix} 0 \\ -8 \end{bmatrix}$	$\begin{bmatrix} -4 \\ 2 \end{bmatrix}$
Reverse Translation				

What do you notice?

Translation SOLUTIONS



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Original Translation	$\begin{bmatrix} 6 \\ 2 \end{bmatrix}$	$\begin{bmatrix} 4 \\ -4 \end{bmatrix}$	$\begin{bmatrix} 0 \\ -8 \end{bmatrix}$	$\begin{bmatrix} -4 \\ 2 \end{bmatrix}$
Reverse Translation	$\begin{bmatrix} -6 \\ -2 \end{bmatrix}$	$\begin{bmatrix} -4 \\ 4 \end{bmatrix}$	$\begin{bmatrix} 0 \\ 8 \end{bmatrix}$	$\begin{bmatrix} 4 \\ -2 \end{bmatrix}$

What do you notice? The reverse translation is the negative of the original vector: $\begin{bmatrix} a \\ b \end{bmatrix}$ becomes $\begin{bmatrix} -a \\ -b \end{bmatrix}$