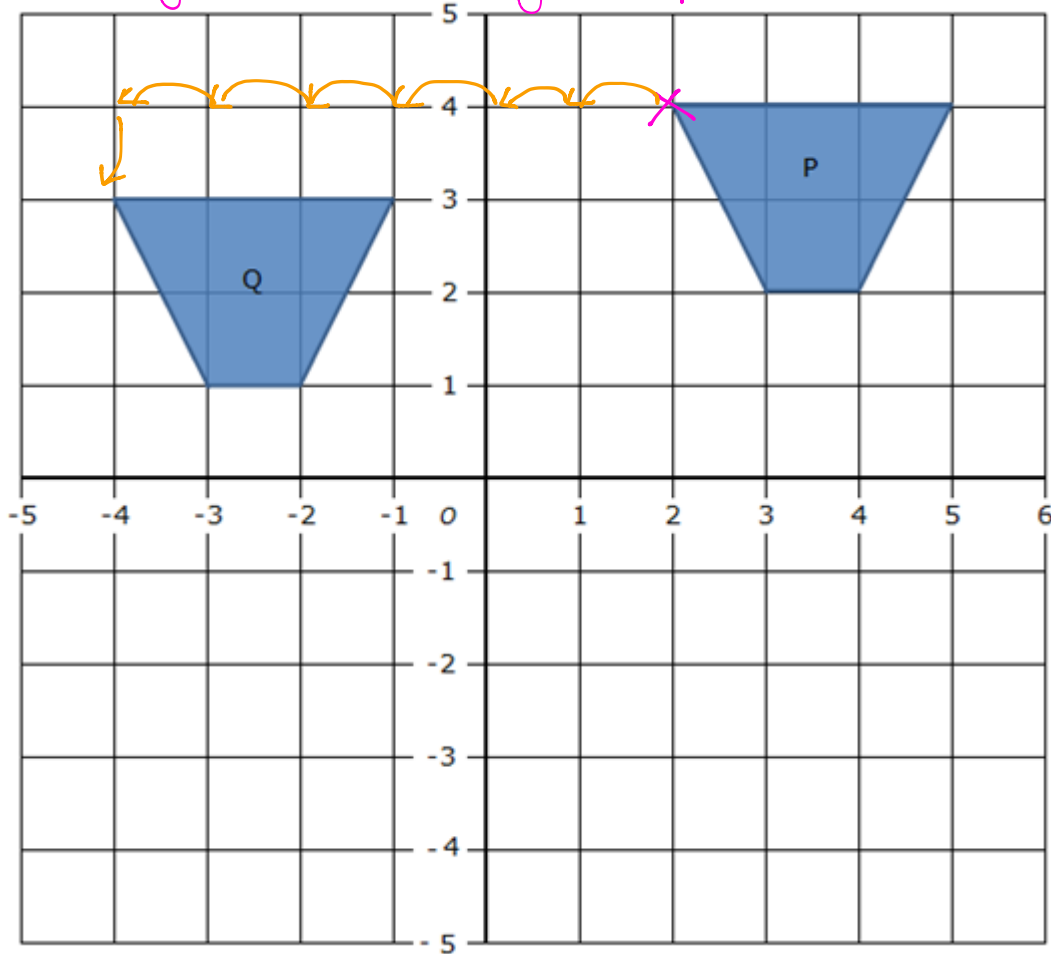


Describe fully the single transformation that will map shape **P** onto shape **Q**

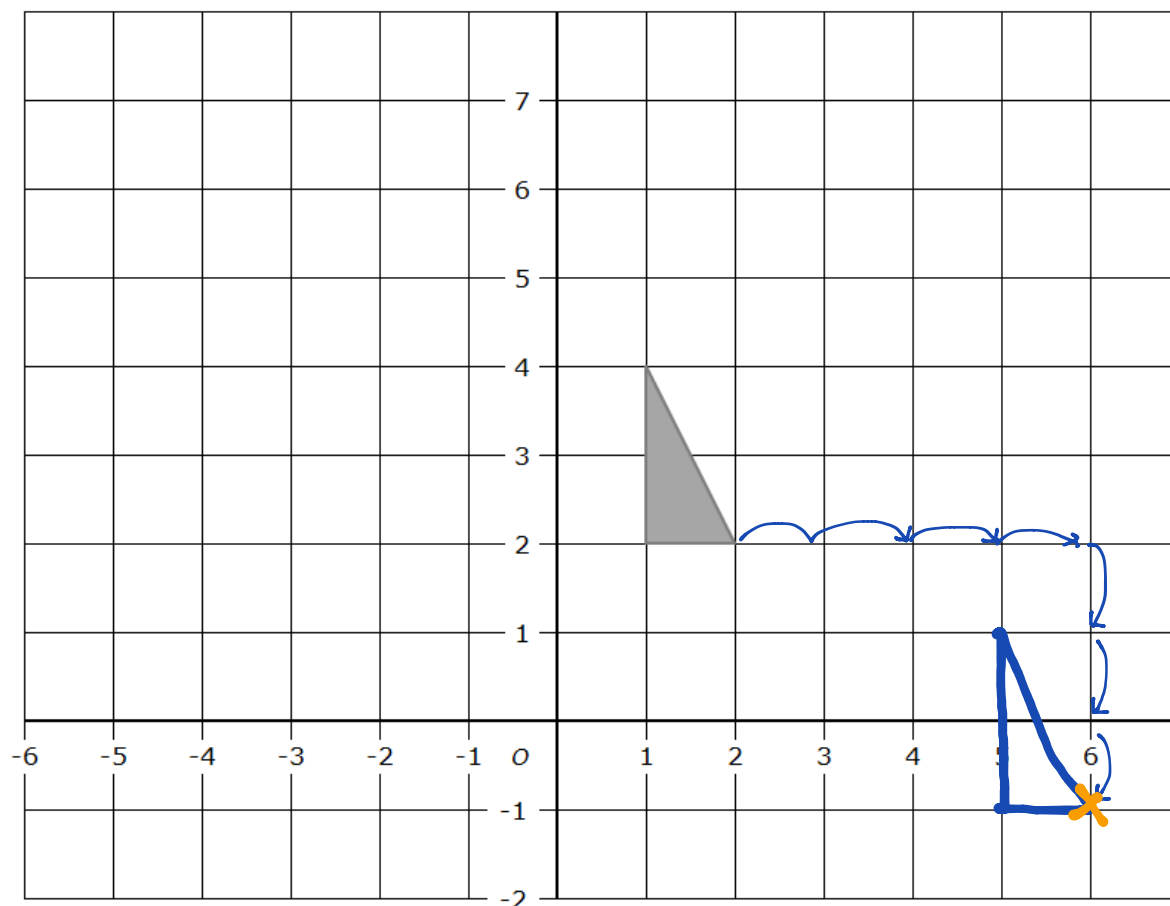
make sure you know which is the "original" shape

*6 left
1 down*



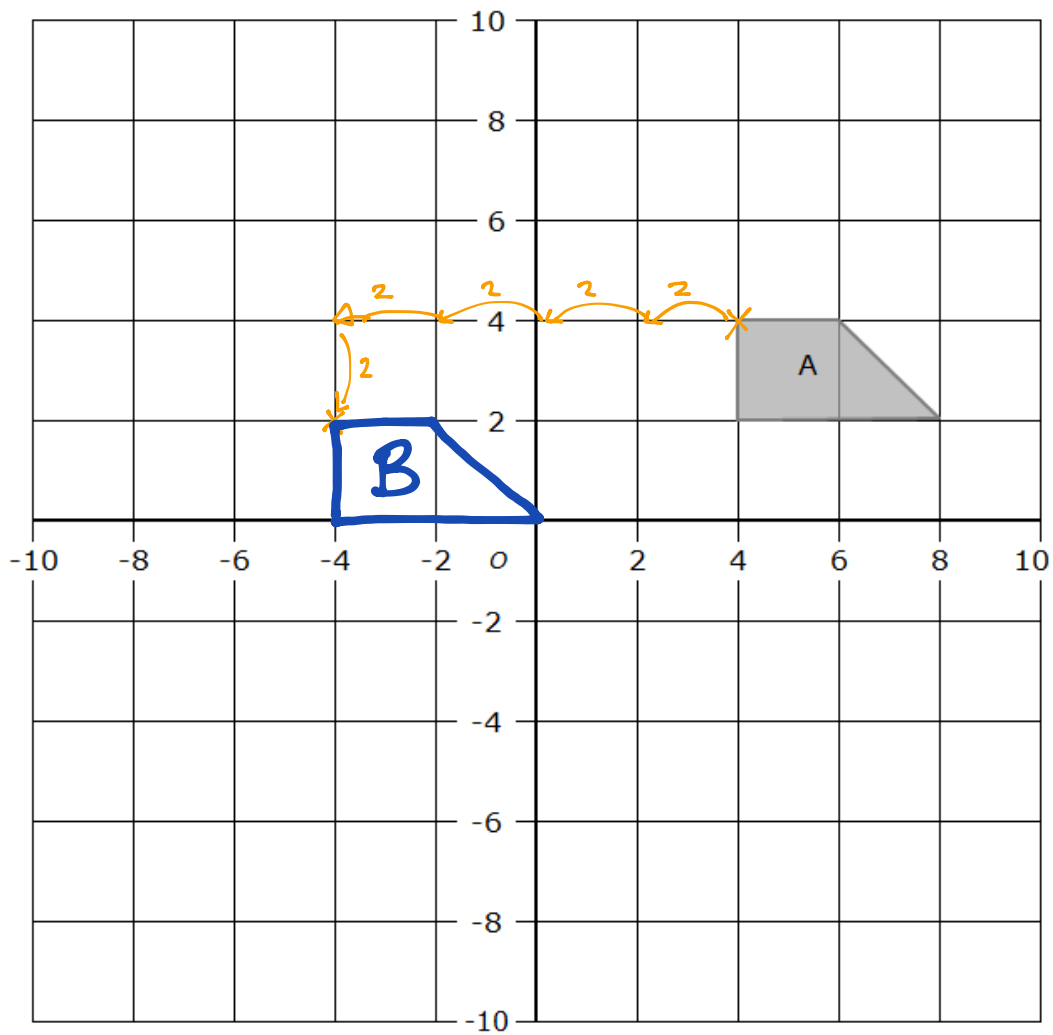
Translation $\begin{pmatrix} -6 \\ -1 \end{pmatrix}$

(2)



Translate the triangle by the vector $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$ means 4 \rightarrow
means 3 \downarrow

(1)

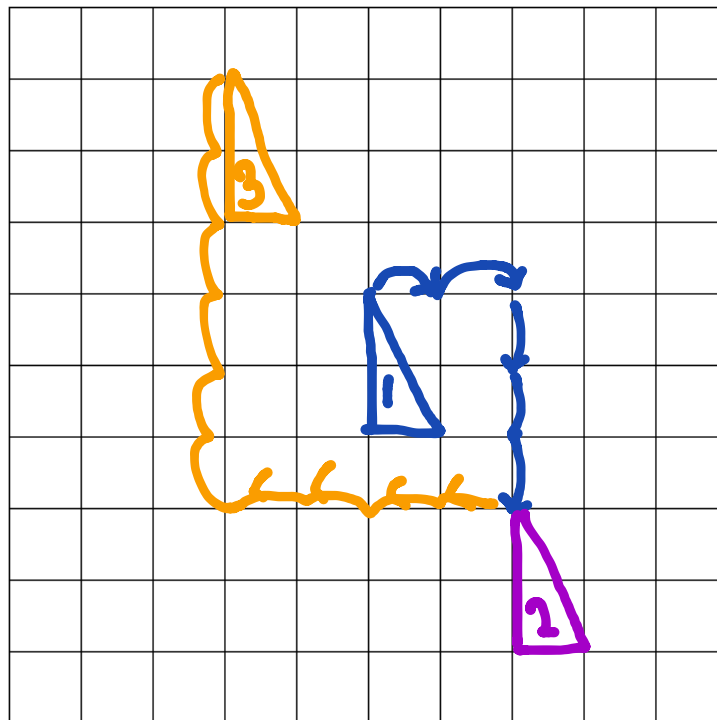


Translate shape A by $\begin{pmatrix} -8 \\ -2 \end{pmatrix}$ $\begin{matrix} 8\leftarrow \\ 2\downarrow \end{matrix}$

Label the new shape **B**.

(2)

Describe fully the single transformation equivalent to a translation through $\begin{pmatrix} 2 \\ -3 \end{pmatrix}$ followed by a translation through $\begin{pmatrix} -4 \\ 6 \end{pmatrix}$. You may use this grid to help you.



1 to 2 is $\begin{pmatrix} 2 \\ -3 \end{pmatrix}$

2 to 3 is $\begin{pmatrix} -4 \\ 6 \end{pmatrix}$

so 1 to 3 is a translation by the vector $\begin{pmatrix} -2 \\ 3 \end{pmatrix}$

(2)

