

# Translate and describe a 2D vector

Maths

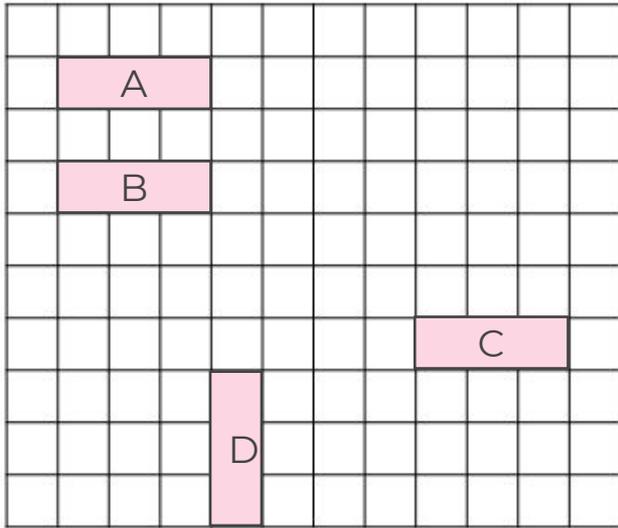
Miss Davies



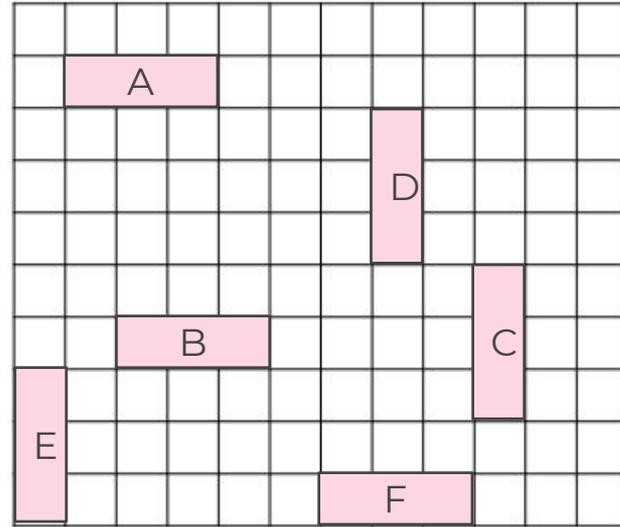
# Translating with vectors

1. Translate each of the shapes as instructed.

$$A \begin{pmatrix} 2 \\ 1 \end{pmatrix} \quad B \begin{pmatrix} 4 \\ -1 \end{pmatrix} \quad C \begin{pmatrix} -3 \\ 0 \end{pmatrix} \quad D \begin{pmatrix} 0 \\ 4 \end{pmatrix}$$



2. Describe the translations.



a) E to D ( )

b) D to C ( )

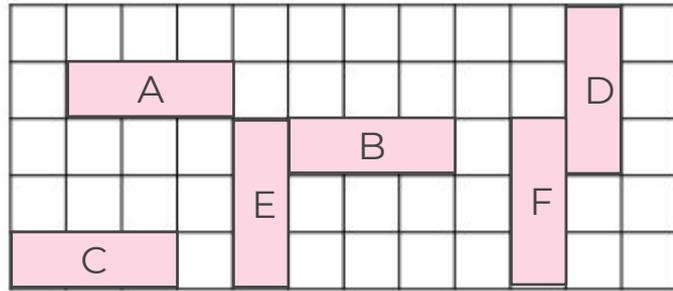
c) B to F ( )

d) B to A ( )



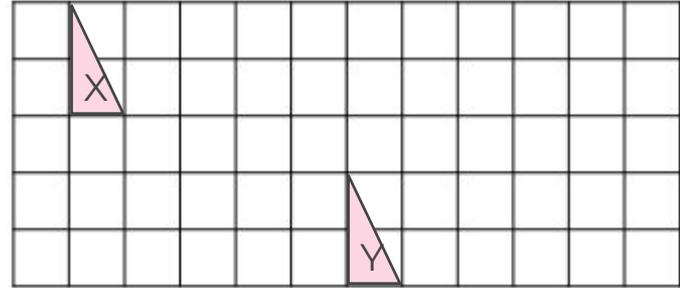
# Translating with vectors

3. Use the diagram to match up the cards.



$\begin{pmatrix} 1 \\ 3 \end{pmatrix}$	D to E	$\begin{pmatrix} -5 \\ 0 \end{pmatrix}$	D to F
$\begin{pmatrix} -4 \\ 1 \end{pmatrix}$	F to E	$\begin{pmatrix} 1 \\ 2 \end{pmatrix}$	F to D
$\begin{pmatrix} -1 \\ -2 \end{pmatrix}$	C to A	$\begin{pmatrix} -6 \\ -2 \end{pmatrix}$	B to A

4. Mark is translating shape X by the vector  $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$ . He has labelled his shape Y.



- What mistake has Mark made?
- What is the correct answer? Label your shape Z.



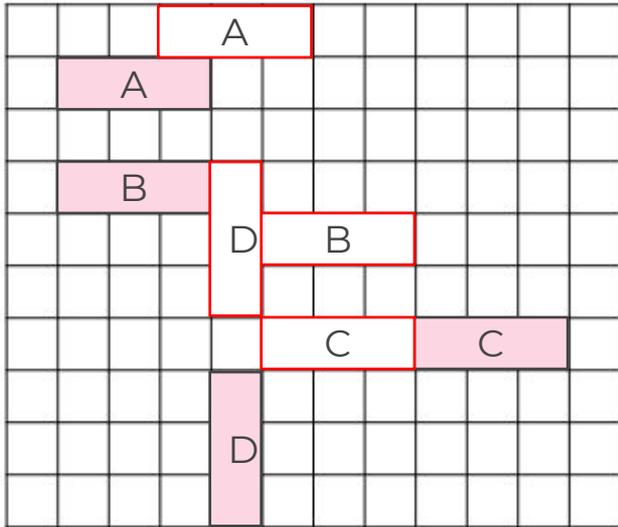
# Answers



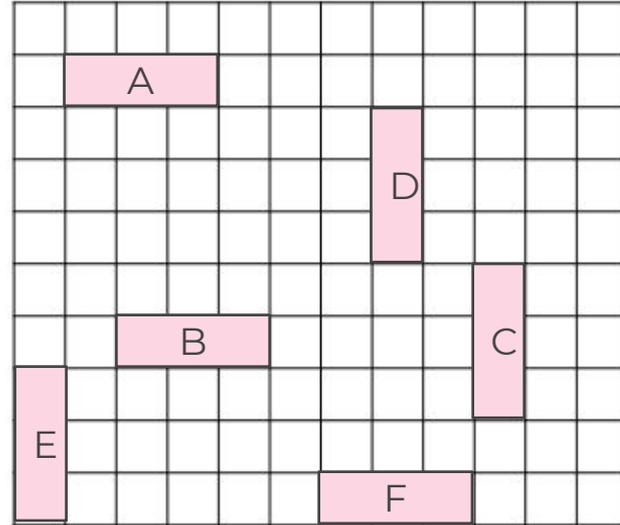
# Translating with vectors

1. Translate each of the shapes as instructed.

$$A \begin{pmatrix} 2 \\ 1 \end{pmatrix} \quad B \begin{pmatrix} 4 \\ -1 \end{pmatrix} \quad C \begin{pmatrix} -3 \\ 0 \end{pmatrix} \quad D \begin{pmatrix} 0 \\ 4 \end{pmatrix}$$



2. Describe the translations.

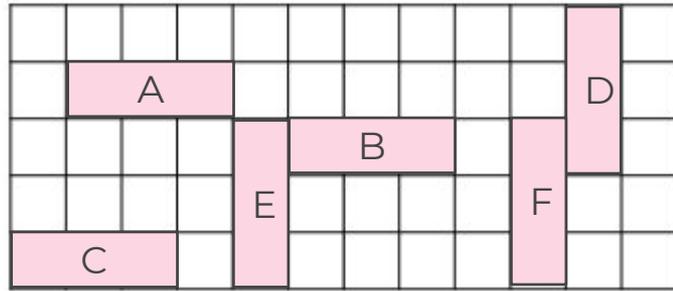


- a) E to D  $\begin{pmatrix} 7 \\ 5 \end{pmatrix}$       b) D to C  $\begin{pmatrix} 2 \\ -3 \end{pmatrix}$   
c) B to F  $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$       d) B to A  $\begin{pmatrix} -1 \\ 5 \end{pmatrix}$



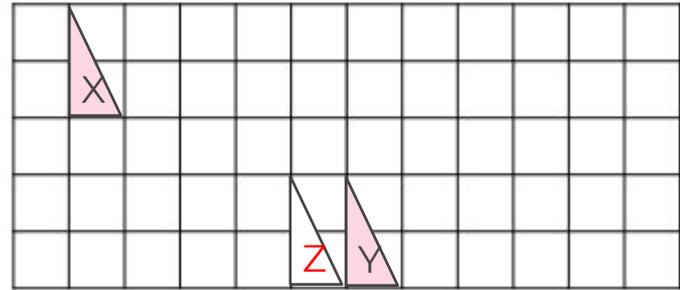
# Translating with vectors

3. Use the diagram to match up the cards.



$\begin{pmatrix} 1 \\ 3 \end{pmatrix}$	C to A	$\begin{pmatrix} -5 \\ 0 \end{pmatrix}$	F to E
$\begin{pmatrix} -4 \\ 1 \end{pmatrix}$	B to A	$\begin{pmatrix} 1 \\ 2 \end{pmatrix}$	F to D
$\begin{pmatrix} -1 \\ -2 \end{pmatrix}$	D to F	$\begin{pmatrix} -6 \\ -2 \end{pmatrix}$	D to E

4. Mark is translating shape X by the vector  $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$ . He has labelled his shape Y.



- a) What mistake has Mark made?  
**Moved 5 squares right instead of 4.**
- b) What is the correct answer?  
 Label your shape Z.

