

Translate and describe a 2D vector

Maths

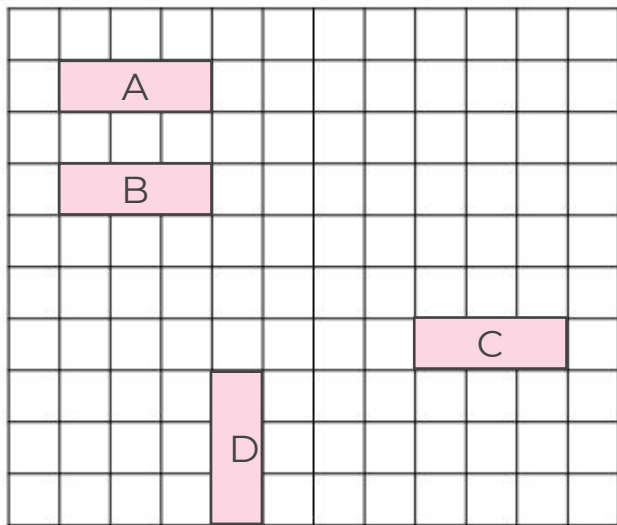
Miss Davies



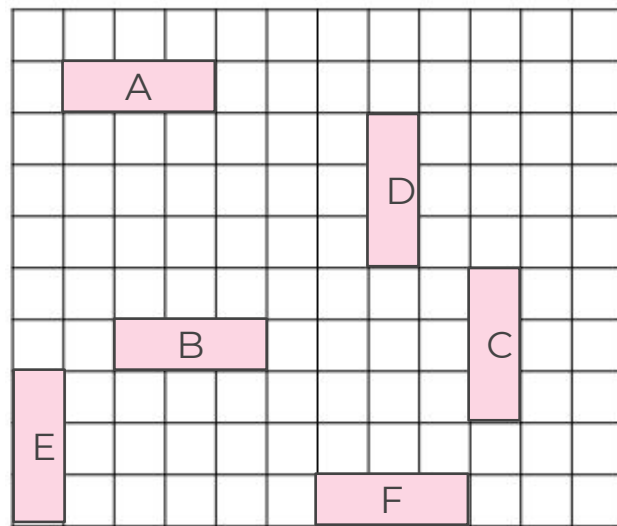
Translating with vectors

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 ()

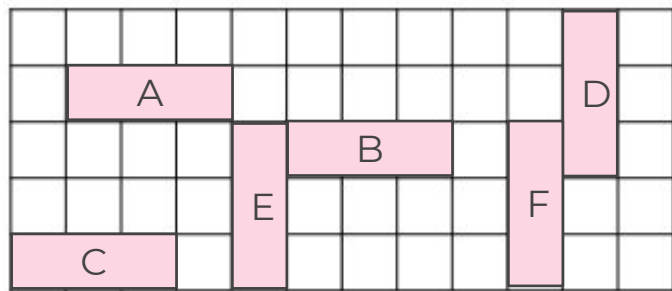
c) B to F ()

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

$$\begin{pmatrix} -1 \\ -2 \end{pmatrix}$$

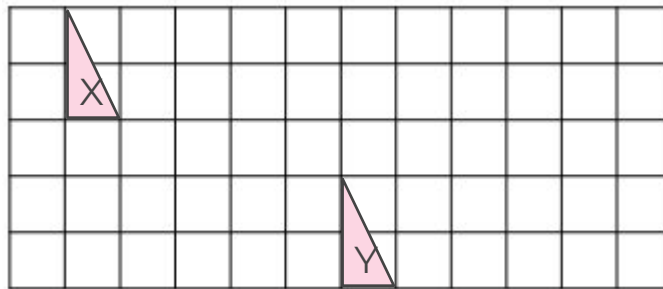
C to A

$$\begin{pmatrix} -6 \\ -2 \end{pmatrix}$$

B to A

4. Mark is translating shape X by the vector $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$

He has labelled his shape Y.



a) What mistake has Mark made?

b) What is the correct answer?
Label your shape Z.



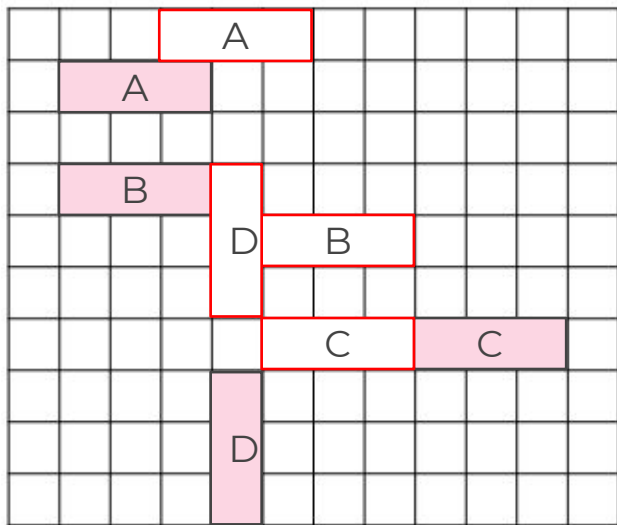
Answers



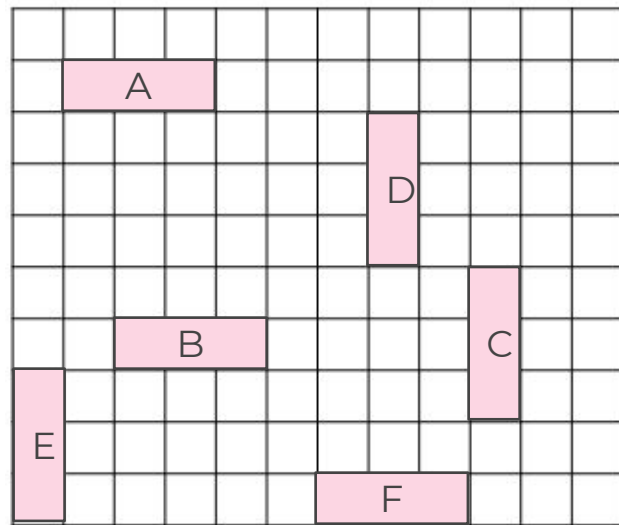
Translating with vectors

1. Translate each of the shapes as instructed.

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

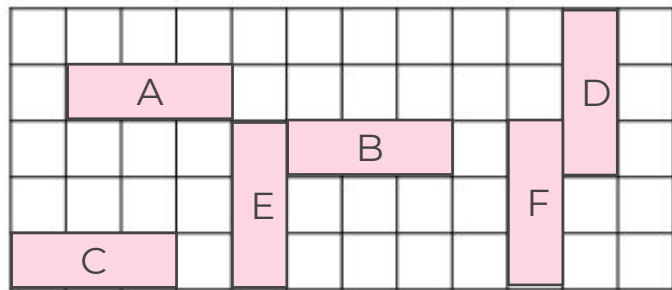
c) B to F $\begin{pmatrix} 4 \\ -3 \end{pmatrix}$

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

$$\begin{pmatrix} -1 \\ -2 \end{pmatrix}$$

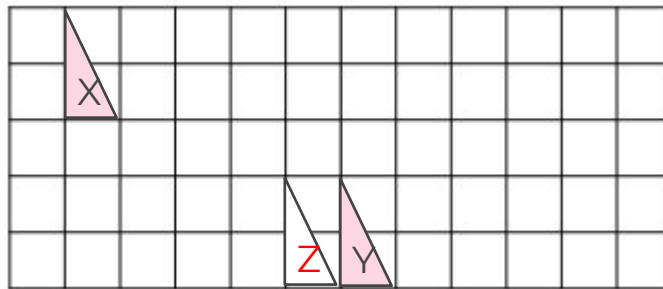
D to F

$$\begin{pmatrix} -6 \\ -2 \end{pmatrix}$$

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.

