

Describing translations *answers*

1 Describe the translation that maps A onto B.

Translation by the vector $\begin{pmatrix} 6 \\ 5 \end{pmatrix}$

2 Describe the translation that maps A onto B.

Translation by the vector $\begin{pmatrix} 5 \\ 6 \end{pmatrix}$

3 Describe the translation that maps A onto B.

Translation by the vector $\begin{pmatrix} 3 \\ 6 \end{pmatrix}$

4 Describe the translation that maps A onto B.

Translation by the vector $\begin{pmatrix} 6 \\ 0 \end{pmatrix}$

5 Describe fully the single transformation that maps A onto B.

Translation by the vector $\begin{pmatrix} -6 \\ 5 \end{pmatrix}$

6 Describe fully the single transformation that maps A onto B.

Translation by the vector $\begin{pmatrix} -5 \\ -4 \end{pmatrix}$

7 Describe fully the single transformation that maps A onto B.

Translation by the vector $\begin{pmatrix} 6 \\ -5 \end{pmatrix}$

8 Describe fully the single transformation that maps B onto A.

Translation by the vector $\begin{pmatrix} -6 \\ 5 \end{pmatrix}$

Describing translations *further practice*

ANSWERS

9 Describe fully the single transformation that maps A onto B.

Translation by the vector $\begin{pmatrix} -7 \\ -5 \end{pmatrix}$

10 Describe fully the single transformation that maps A onto B.

Translation by the vector $\begin{pmatrix} 2 \\ 1 \end{pmatrix}$

11 Point P is translated to point Q. Write the column vector of the translation.

The vector $\begin{pmatrix} -3 \\ 7 \end{pmatrix}$

12 A crane moves container A to position B without turning it. Write the movement as a column vector.

The vector $\begin{pmatrix} 6 \\ -5 \end{pmatrix}$

13 Which shape is a translation of A? Write its column vector.

Shape C, $\begin{pmatrix} 3 \\ -7 \end{pmatrix}$

14 A ferry sails from the harbour H to island I, then on to island J. Write each journey as a column vector.

H to I $\begin{pmatrix} 4 \\ 5 \end{pmatrix}$ I to J $\begin{pmatrix} 5 \\ -3 \end{pmatrix}$

15 A border is made by translating tile A to B, then B to C, by the same vector. Write the vector. Where is the top corner of the next tile?

$\begin{pmatrix} 4 \\ 1 \end{pmatrix}$ next top corner (6, 2)

16 Sam says the column vector of the translation that maps A onto B is $\begin{pmatrix} 5 \\ 2 \end{pmatrix}$. Explain Sam's mistake.

He swapped them. It is $\begin{pmatrix} 2 \\ 5 \end{pmatrix}$