

Name: _____

Exam Style Questions

Translations



Corbettmaths

Equipment needed: Ruler, Pencil and Pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

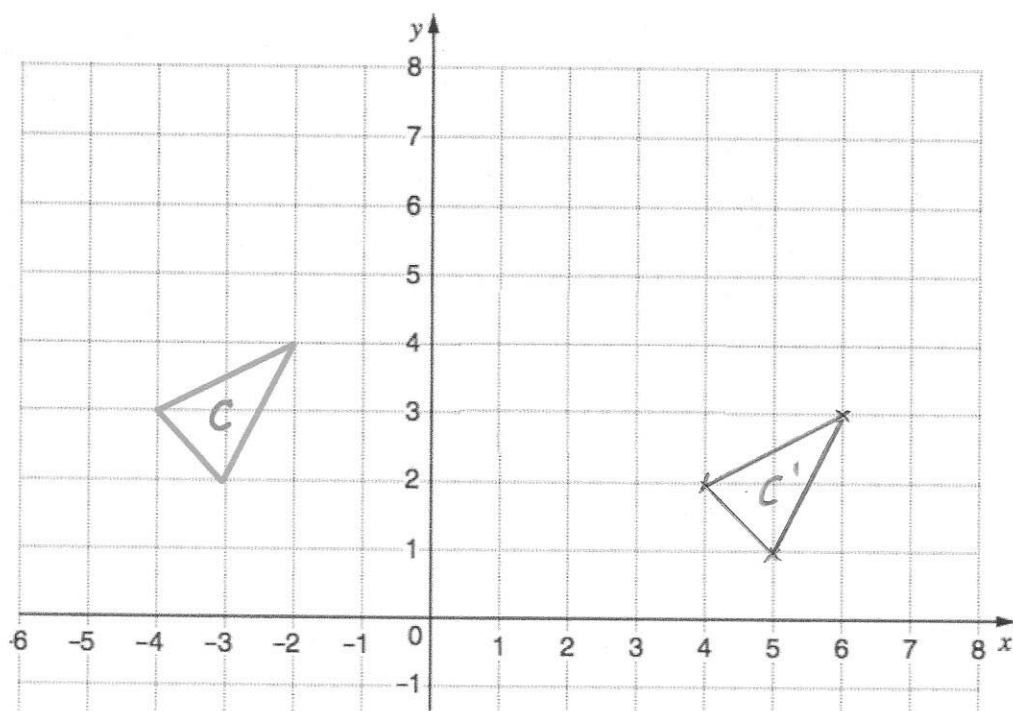
Videos 325, 326



Answers and Video Solutions



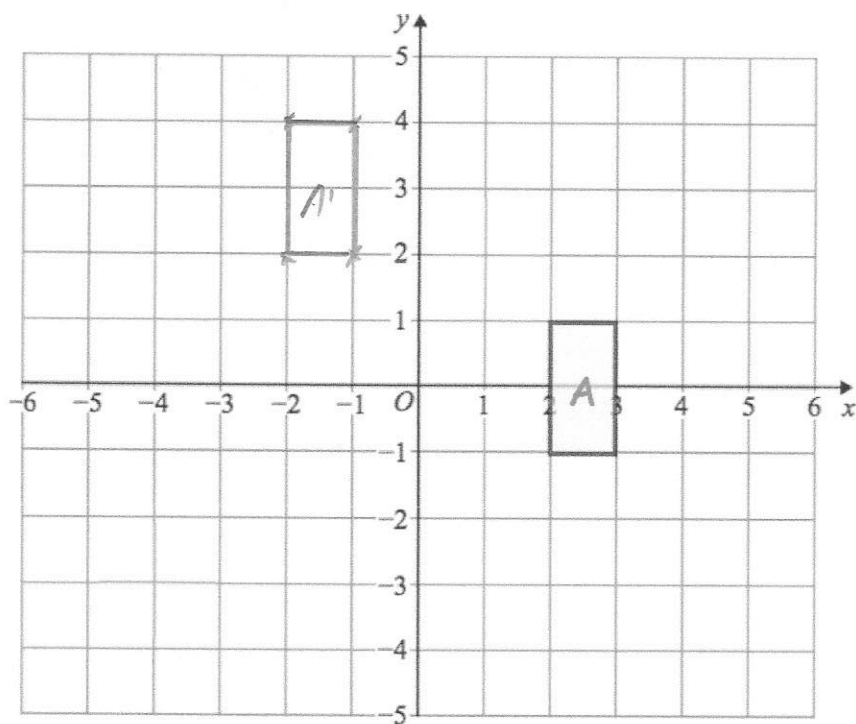
1.



Translate triangle C by 8 squares right and 1 square down.

(1)

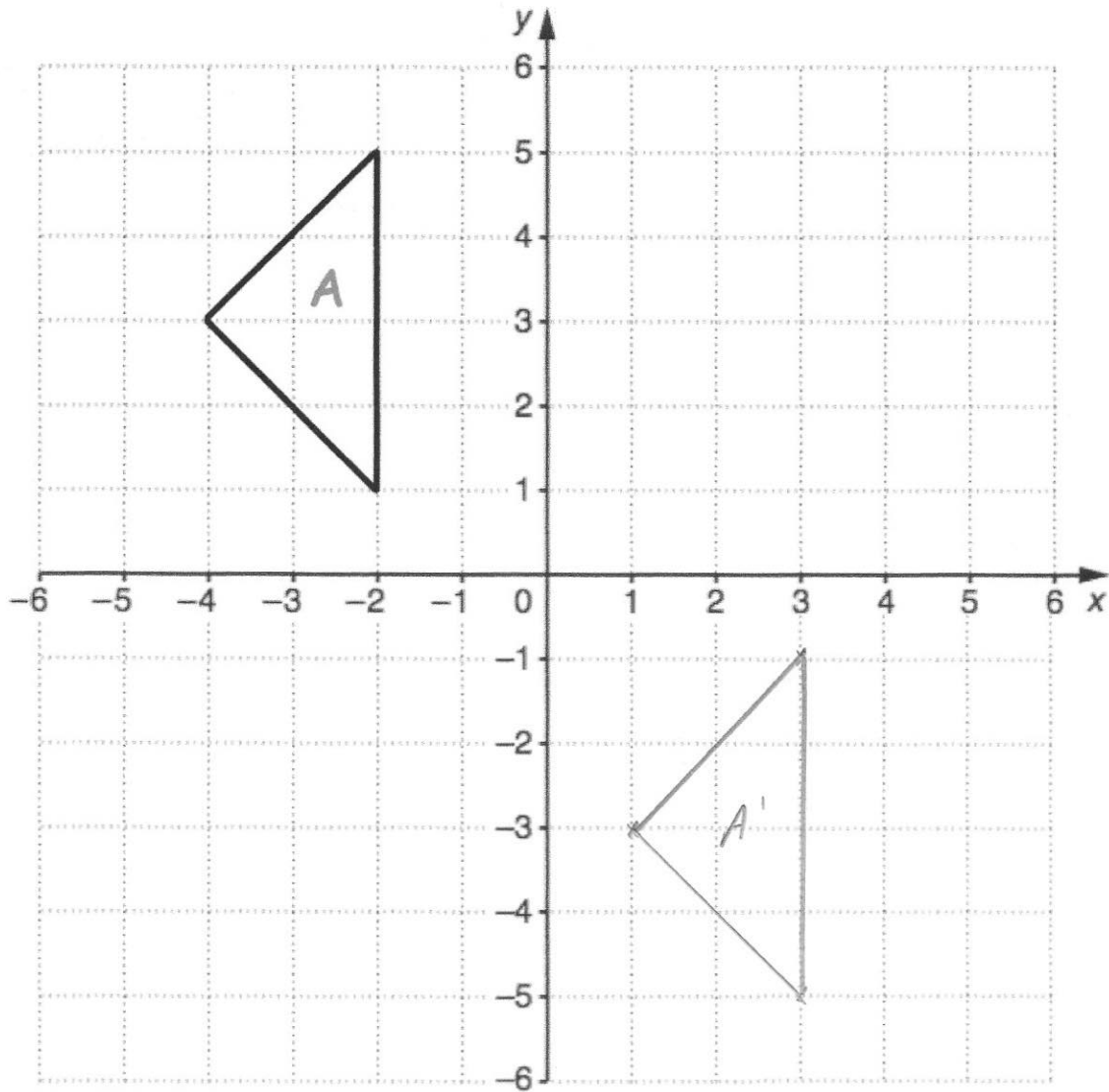
2.



Translate rectangle A by 4 squares left and 3 square up.

(1)

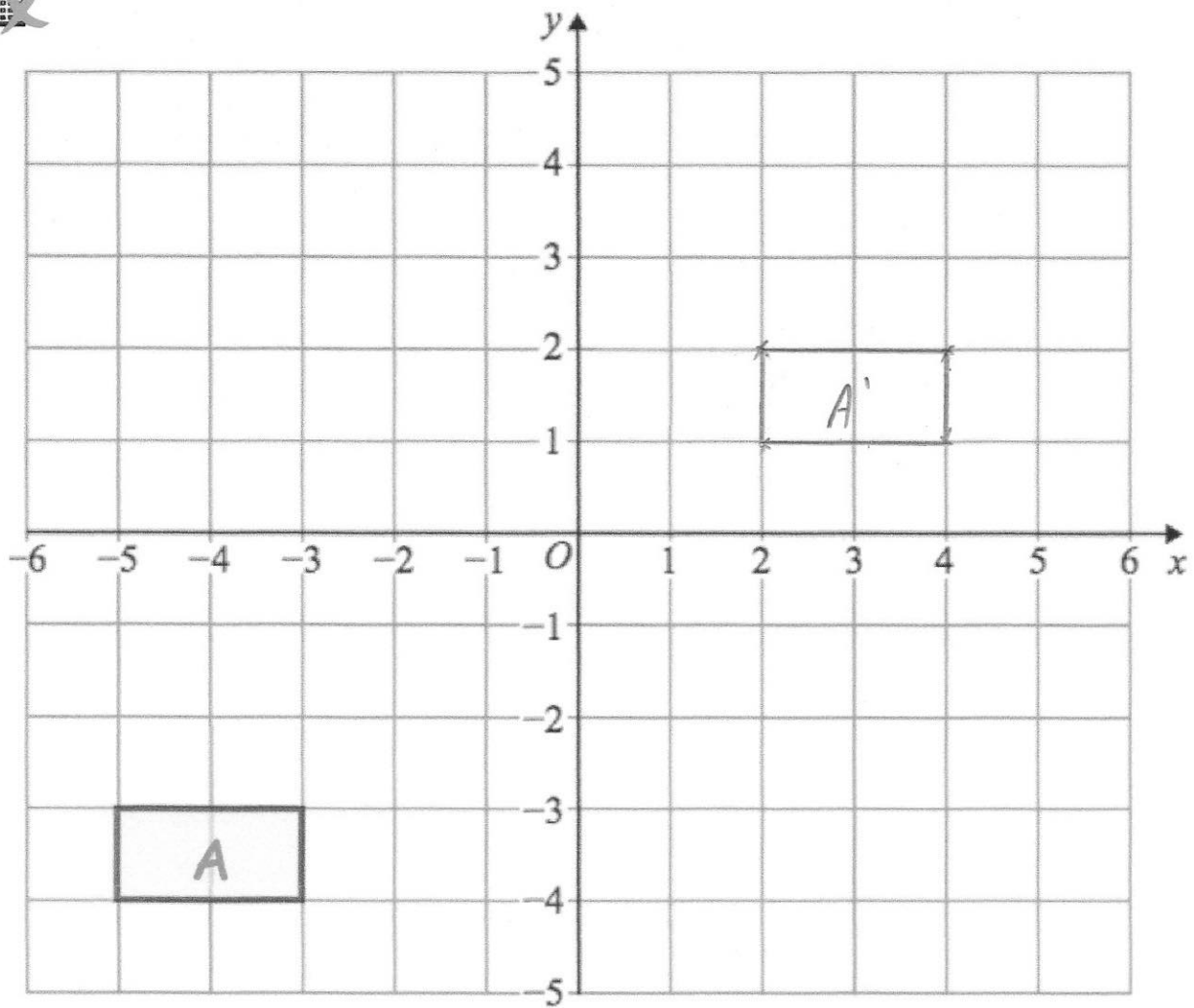
3.



Translate triangle A by $\begin{pmatrix} 5 \\ -6 \end{pmatrix}$ 5 right
6 down

(2)

4.

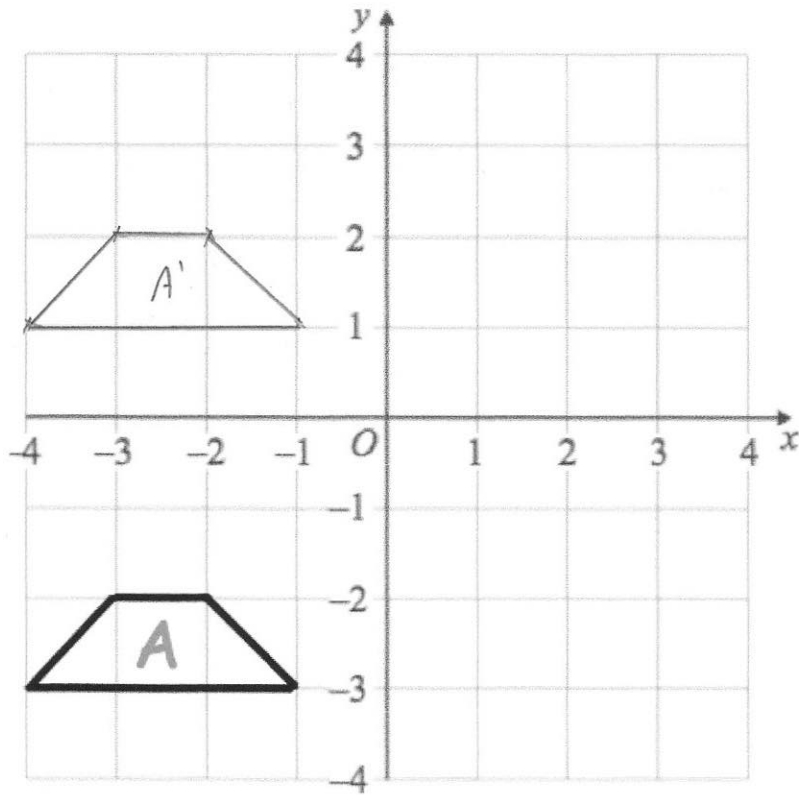


Translate rectangle A by $\begin{pmatrix} 7 \\ 5 \end{pmatrix}$ *7 right*
5 up

Label the new shape B.

(2)

5.



Translate trapezium A by the vector $\begin{pmatrix} 0 \\ 4 \end{pmatrix}$ 4 up

(1)

6.



A square is translated by the vector $\begin{pmatrix} 7 \\ 0 \end{pmatrix}$

Which direction does the square move?

down

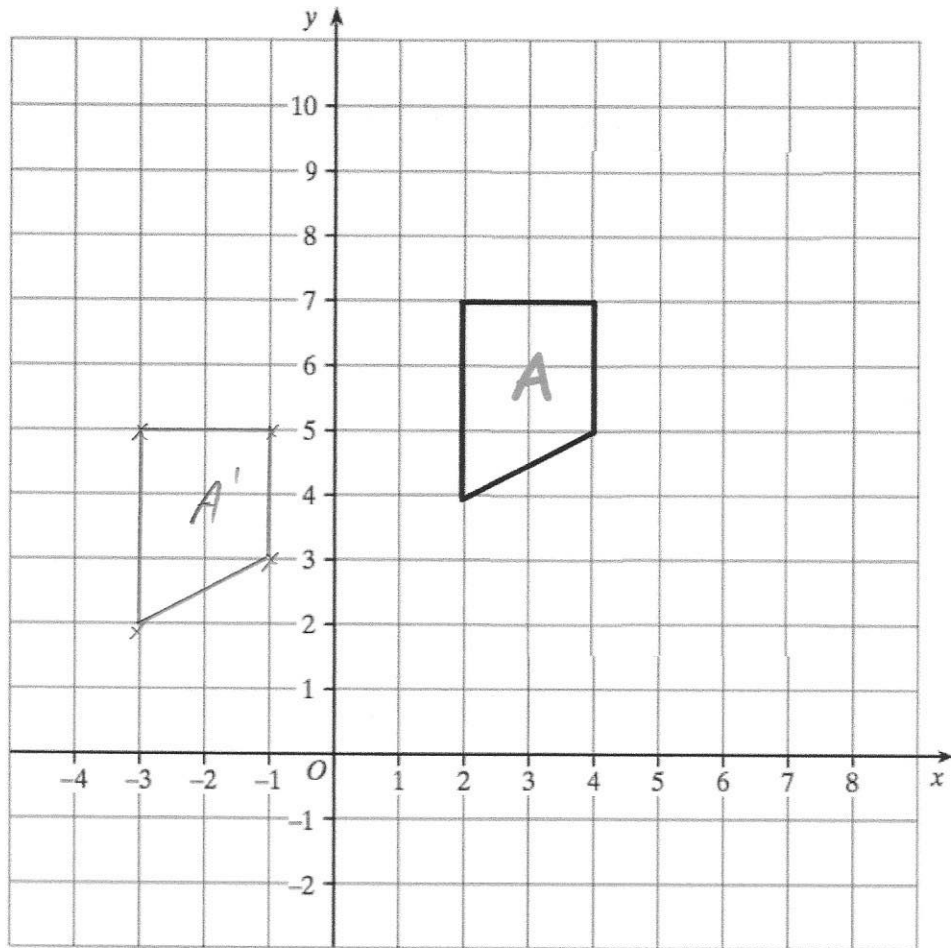
up

right

left

(1)

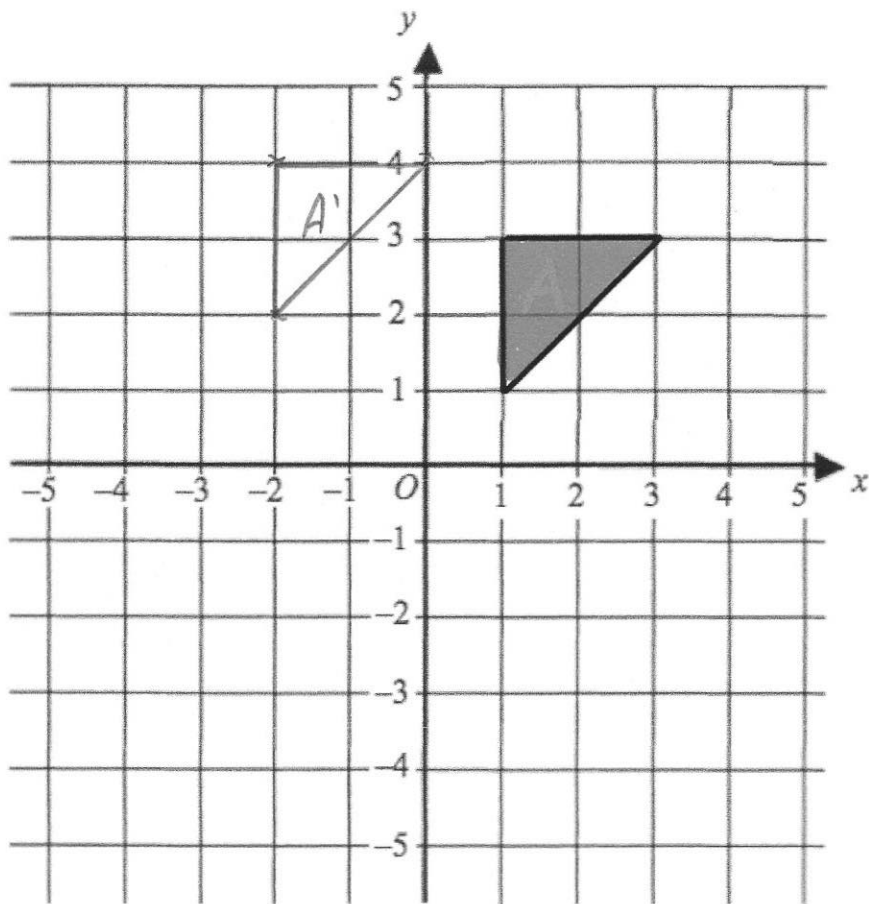
7.



Translate shape A by the vector $\begin{pmatrix} -5 \\ -2 \end{pmatrix}$ *5 left*
2 down.

(2)

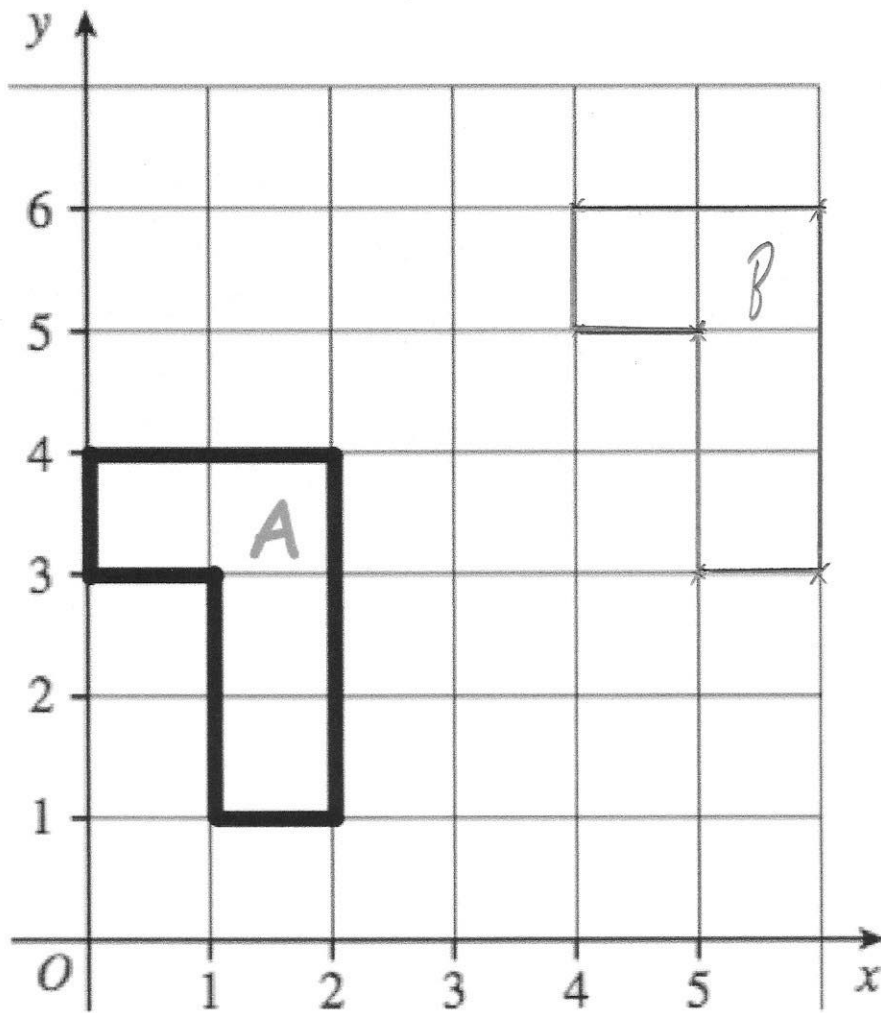
8.



Translate triangle A by the vector $\begin{pmatrix} -3 \\ 1 \end{pmatrix}$ *left*
up

(2)

9.



- (a) Translate shape A by the vector $\begin{pmatrix} 4 \\ 2 \end{pmatrix}$ and label B.

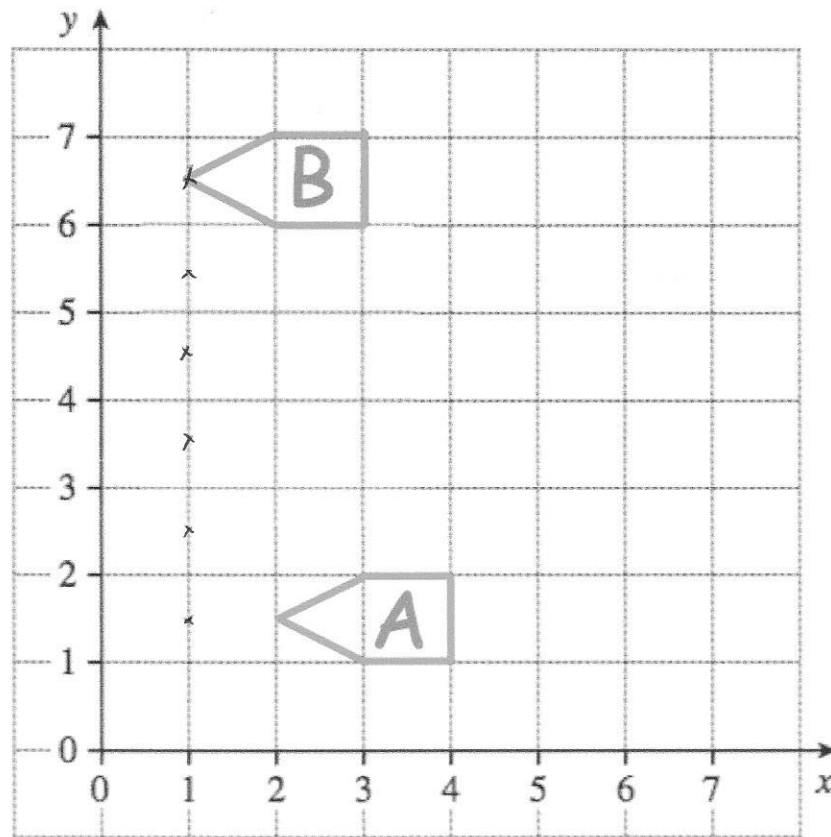
(2)

- (b) Write down the translation vector that would return B to A.

$$\begin{pmatrix} -4 \\ -2 \end{pmatrix}$$

(1)

10.

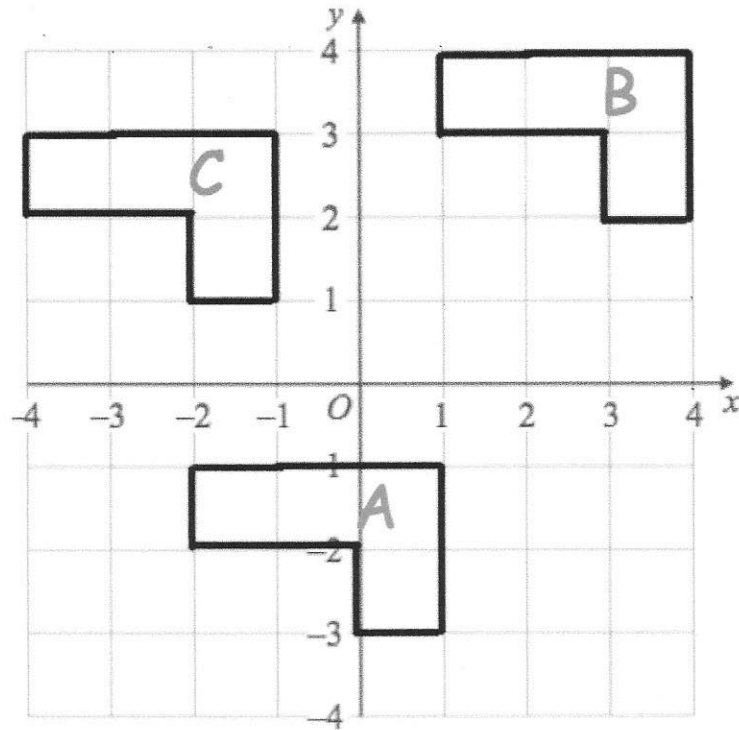


Write down the translation vector that would take A to B.

$$\begin{pmatrix} -1 \\ 5 \end{pmatrix}$$

(1)

11.



(a) Write down the translation vector that would take A to B.

$$\begin{pmatrix} 3 \\ \dots\dots\dots \\ 5 \end{pmatrix}$$

(1)

(b) Write down the translation vector that would take B to C.

$$\begin{pmatrix} -5 \\ \dots\dots\dots \\ -1 \end{pmatrix}$$

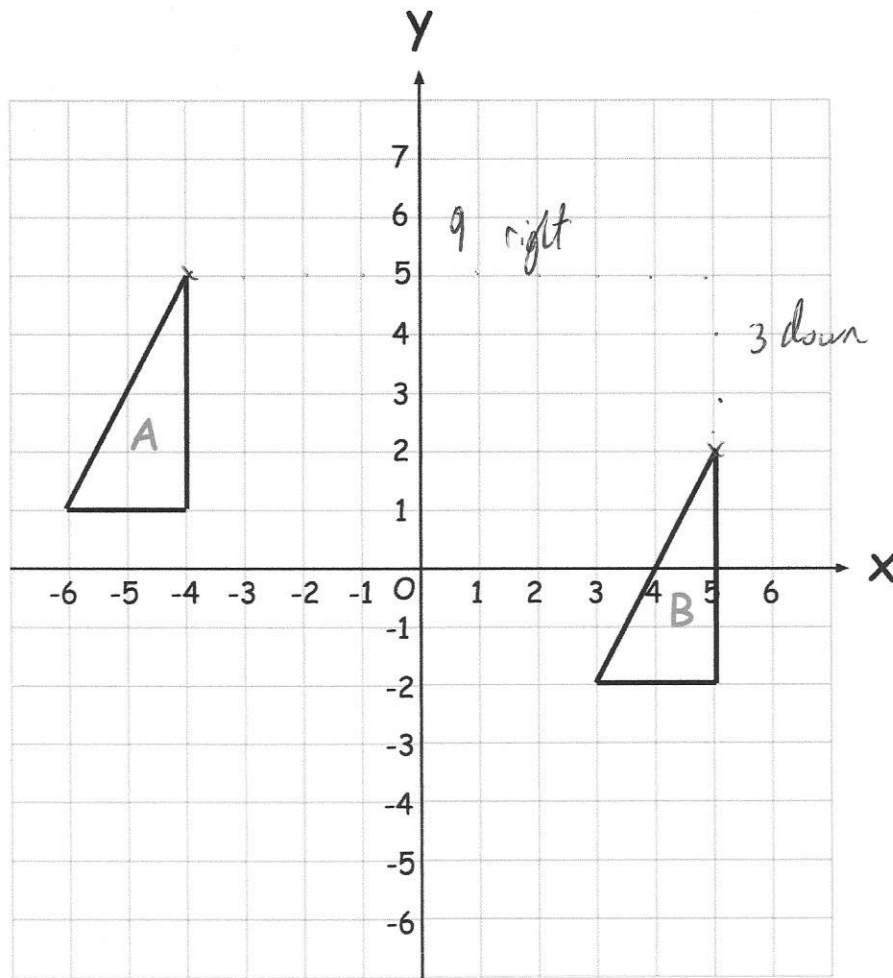
(1)

(c) Write down the translation vector that would take C to A.

$$\begin{pmatrix} 2 \\ \dots\dots\dots \\ -4 \end{pmatrix}$$

(1)

12.



Write down the translation vector that maps triangle A onto triangle B.

$$\begin{pmatrix} 9 \\ -3 \end{pmatrix}$$

.....

(2)

13. The translation vector that maps shape A to shape B is $\begin{pmatrix} -3 \\ 4 \end{pmatrix}$



Write down the translation vector that maps shape B to shape A.

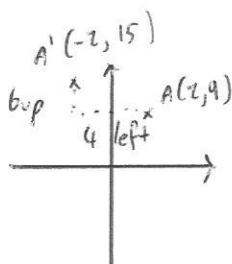
$$\begin{pmatrix} 3 \\ -4 \end{pmatrix}$$

(1)

14. The point $A(2, 9)$ is translated to the point $A'(-2, 15)$



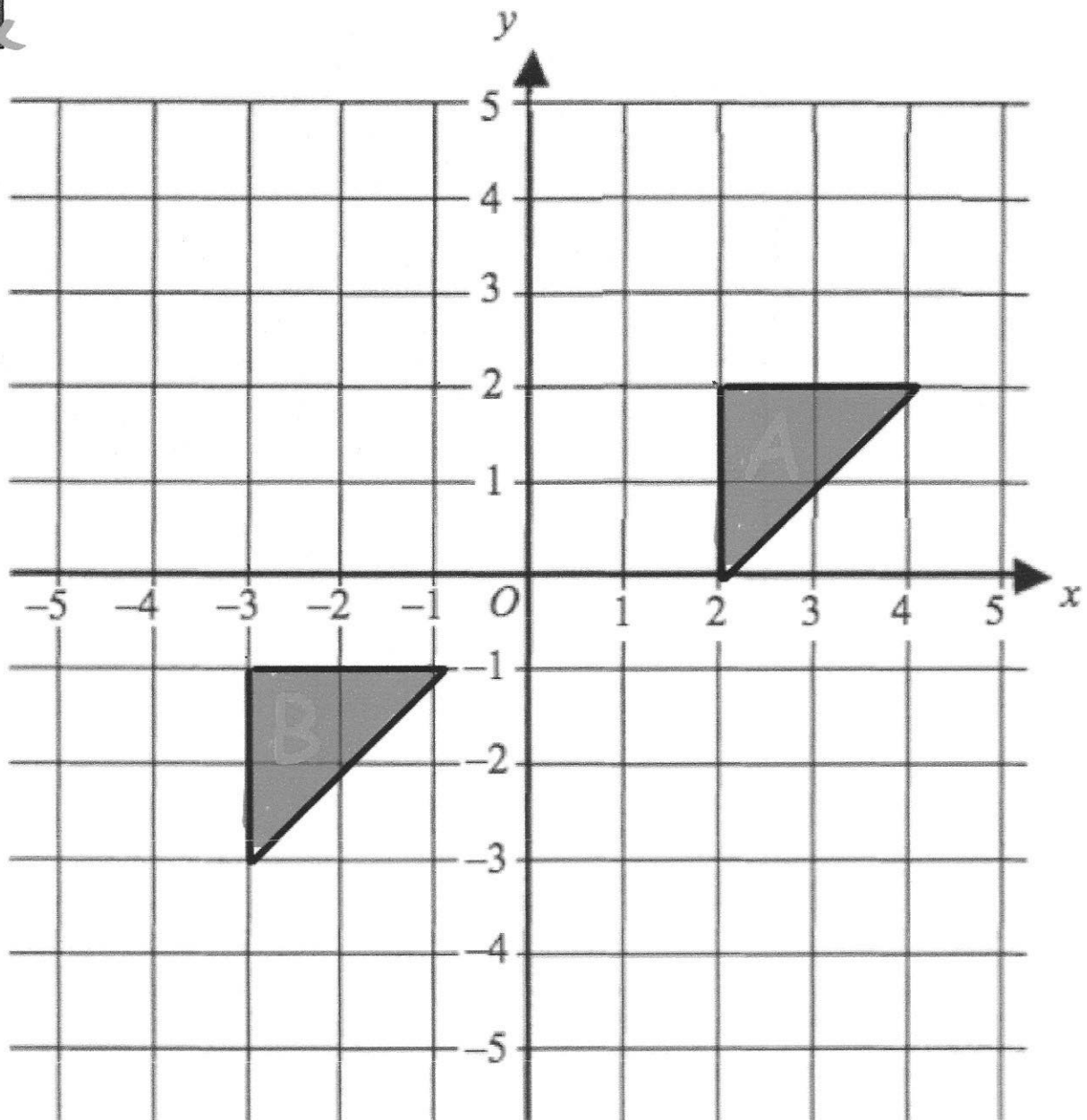
Write down the translation vector that maps point A to point A'



$$\begin{pmatrix} -4 \\ 6 \end{pmatrix}$$

(1)

15.

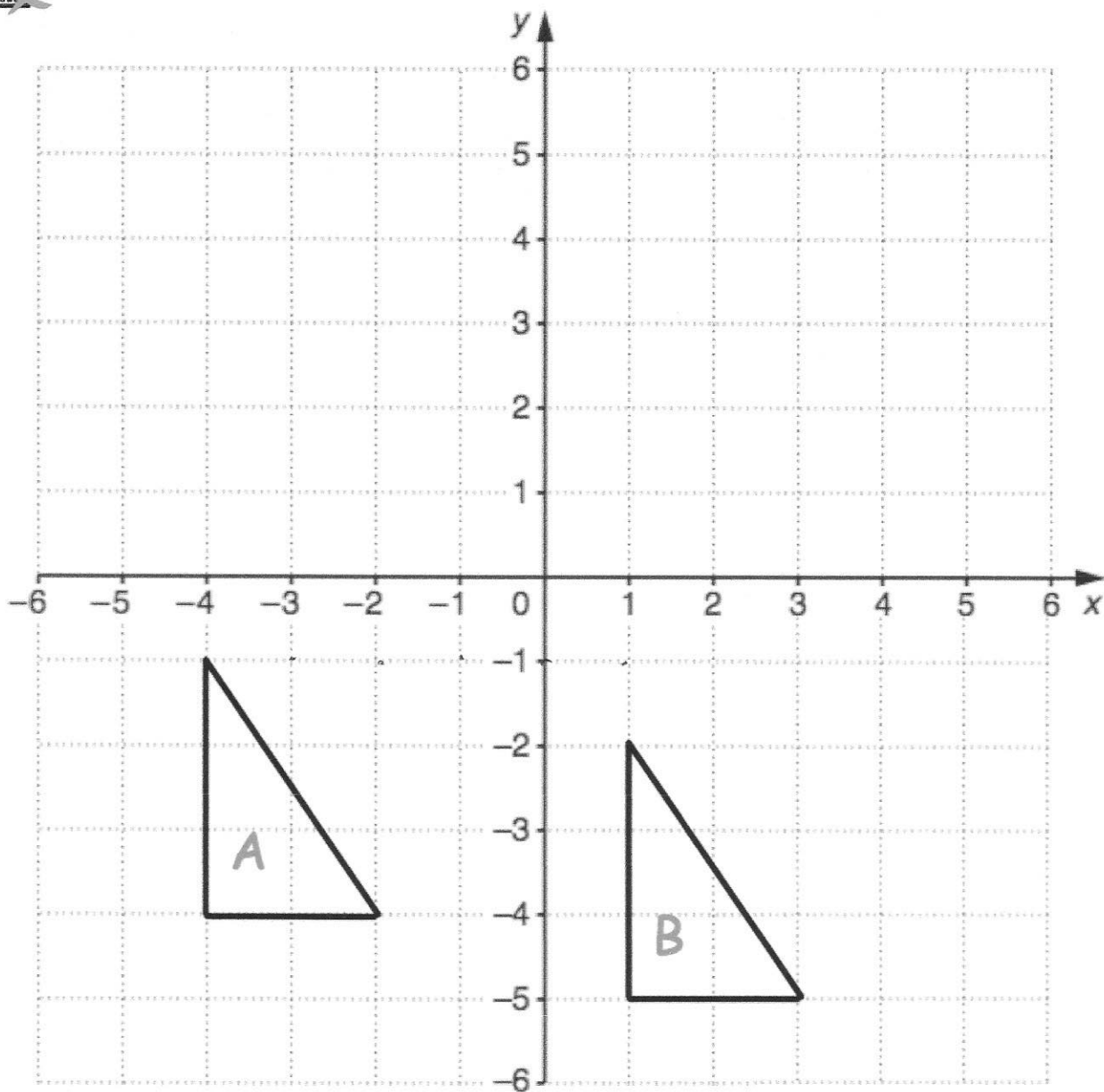


Describe fully the single transformation that maps shape A onto shape B.

A translation by the vector $\begin{pmatrix} -5 \\ -3 \end{pmatrix}$

(2)

16.

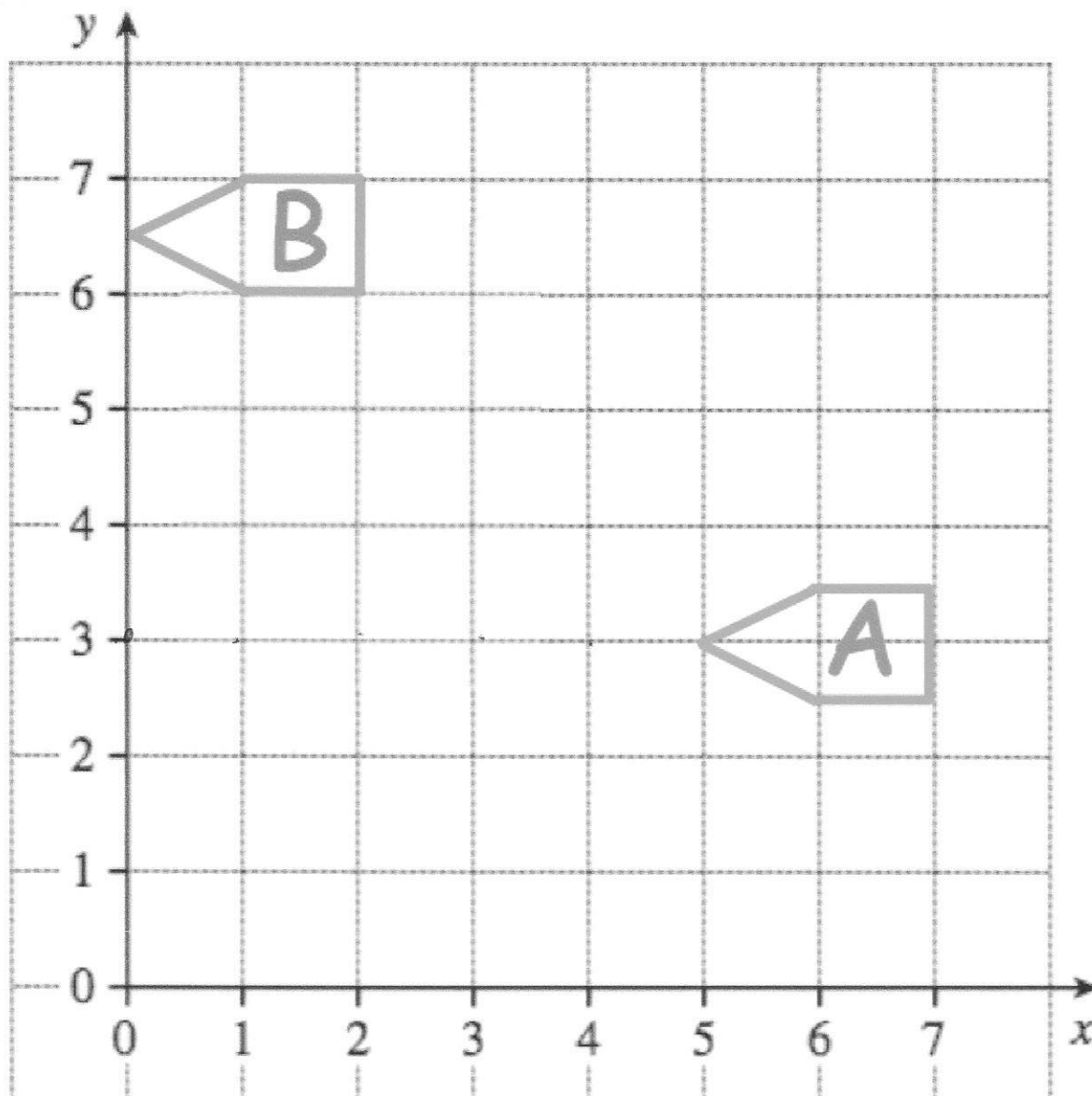


Describe fully the single transformation that maps shape A onto shape B.

A translation by the vector $\begin{pmatrix} 5 \\ -1 \end{pmatrix}$

(2)

17.



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

A translation by the vector $\begin{pmatrix} -5 \\ 3.5 \end{pmatrix}$

(2)

18.

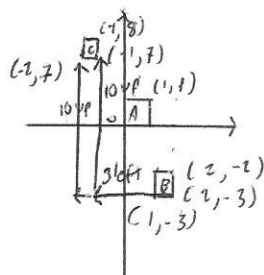


The translation vector that maps shape A to shape B is $\begin{pmatrix} 1 \\ -3 \end{pmatrix}$ 1 right 3 down

The translation vector that maps shape A to shape C is $\begin{pmatrix} -2 \\ 7 \end{pmatrix}$

Write down the translation vector that maps shape B to shape C.

e.g.



$$\begin{pmatrix} -3 \\ 10 \end{pmatrix} \quad (2)$$