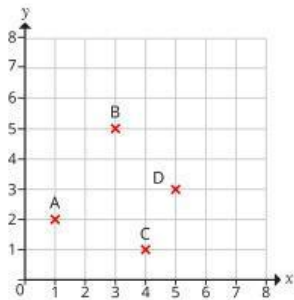


- 1 Four points have been plotted on a coordinate grid.

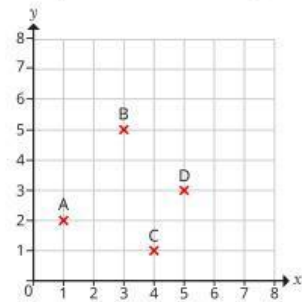


- a) Translate each point 3 squares to the right.  
b) Complete the table to show the coordinates of each point before and after the translation.

Point	Coordinates before	Coordinates after
A		
B		
C		
D		

- c) Which coordinate stayed the same? \_\_\_\_\_  
d) Which coordinate changed? \_\_\_\_\_  
e) Point E has the coordinates (12, 4).  
It is translated 3 squares to the right.  
What are the coordinates of the translated point? (  ,  )

- 2 Four points have been plotted on a coordinate grid.



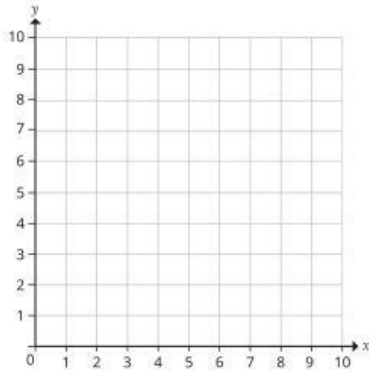
- a) Translate each point 2 squares up.  
b) Complete the table to show the coordinates of each point before and after the translation.

Point	Coordinates before	Coordinates after
A		
B		
C		
D		

What do you notice?

- c) Which coordinate stayed the same? \_\_\_\_\_  
d) Which coordinate changed? \_\_\_\_\_  
e) Point E has the coordinates (12, 4).  
It is translated 2 squares up.  
What are the coordinates of the translated point? (  ,  )

- 3 Write the coordinates of each point after the given translation. You can use the coordinate grid to help you.



- a) (2, 7) is translated 4 squares right and 3 squares down. (, )
- b) (9, 2) is translated 8 squares left and 5 squares up. (, )
- c) (10, 0) is translated 10 squares left. (, )
- d) (0, 4) is translated 6 squares right and 4 squares down. (, )

Is it possible to work these out without drawing the points?

- 4 The coordinates of the vertices of a rectangle are (18, 4), (18, 7), (23, 4) and (23, 7).

The rectangle is translated 10 squares left and 2 squares down. What are the coordinates of the vertices now?

(, ) (, ) (, ) (, )



- 5 Point M has the coordinates (12, 19).

It is translated 21 squares right and 9 squares down.

Alex and Amir are working out the coordinates of the translated points. Here are their answers.

Alex (, )

Amir (, )

Who do you agree with? \_\_\_\_\_

Talk about it with a partner.

- 6 Point X has the coordinates (17, 21).

After being translated, it has the coordinates (11, 35).

Describe the translation.

\_\_\_\_\_

- 7 A pentagon has been translated.

The table shows the coordinates of each vertex before and after the translation. Some of the information is missing.

Before	After
( <input type="text"/> , 7)	(5, 13)
(2, <input type="text"/> )	(5, 20)
(11, 7)	(14, <input type="text"/> )
( <input type="text"/> , 14)	(14, <input type="text"/> )
( <input type="text"/> , <input type="text"/> )	(10, 25)

a) Complete the table.

b) Describe the translation.

\_\_\_\_\_

