

LO: To recognise the translation of a shape

What is a translation?

- Translation is when a shape is moved a certain distance from its original position.

This clip shows the different types of movement a shape can do. You looked at reflective symmetry last week (and will focus on rotation at a later date)

<https://www.bbc.co.uk/bitesize/topics/z2dqrwx/articles/zcis97h>

Now have a look at the Lesson 1 Translation PowerPoint. You will need to run the slide show as there is a quiz within it. You should be able to see a translation (sliding of a shape) in action.

Have a go at this one:

- A square is translated two dots to the right.
Draw the new square.



Now try:

- A square is translated two dots to the right, and three down. Draw the new square.

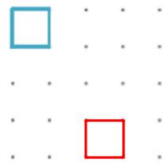


I have drawn the answers in red here. Did you get the same?

- A square is translated two dots to the right. Draw the new square.



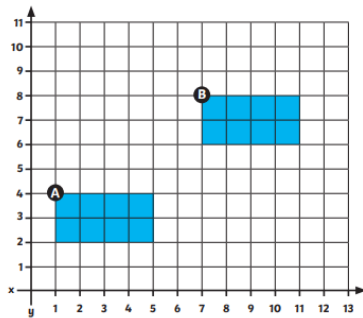
- A square is translated two dots to the right, and three down. Draw the new square.



Activity - Complete Lesson 1 activity sheet by describing the translation which has taken place.

Here is an example of the sort of answer you might give:

Name these shapes and describe how they have been translated from point A to point B. Remember to say how many squares left/right the shape has moved and then how many squares up/down the shape has moved, e.g.



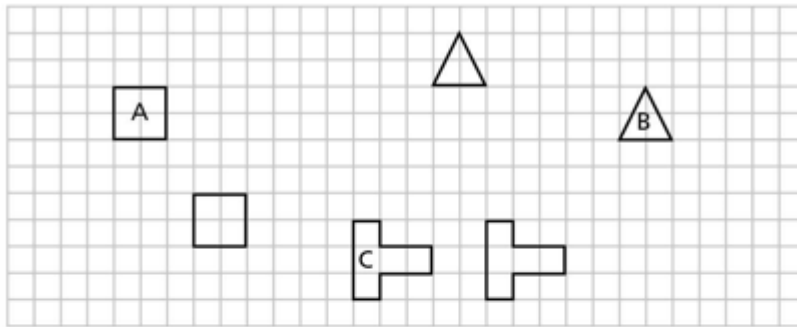
The rectangle has been translated 6 squares right and 4 squares up.

LO: To translate a shape

What is a translation? Look back at yesterday's video if you need a reminder.

Have a go at this:

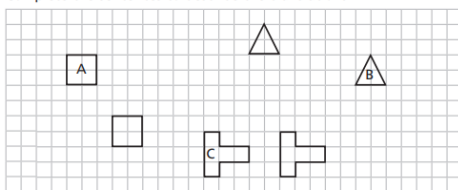
Complete the sentences to describe the translations.



- a) Shape A has been translated squares to the right and squares down.
- b) Shape B has been translated squares to the _____ and squares _____
- c) Shape C has been translated squares to the _____ and squares _____

The answers are below:

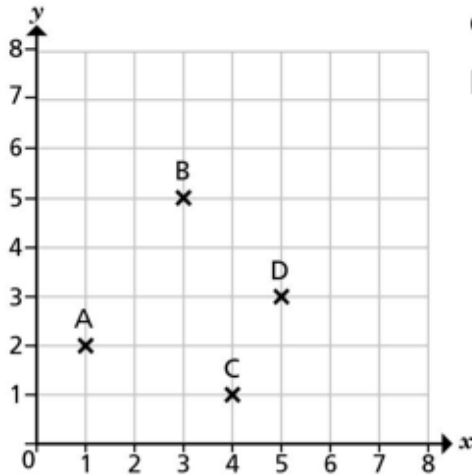
Complete the sentences to describe the translations.



- a) Shape A has been translated squares to the right and squares down.
- b) Shape B has been translated squares to the left and squares up
- c) Shape C has been translated squares to the right and squares up/down

Today you are having a go at following instructions to translate a shape. To start with, just try moving in one direction.

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



- a) Translate each point 3 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		

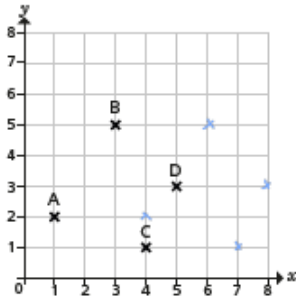
What do you notice

- 1 c) Which part of the coordinate stayed the same? _____
 d) Which part of the coordinate changed? _____
 e) Point E has the coordinates (12, 4). It is translated 3 to the right.

What are the coordinates of the translated point? (,)

Answer:

1 Four points have been plotted on a coordinate grid.



- a) Translate each point 3 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	(1, 2)	(4, 2)
B	(3, 5)	(6, 5)
C	(4, 1)	(7, 1)
D	(5, 3)	(8, 3)

What do you notice?

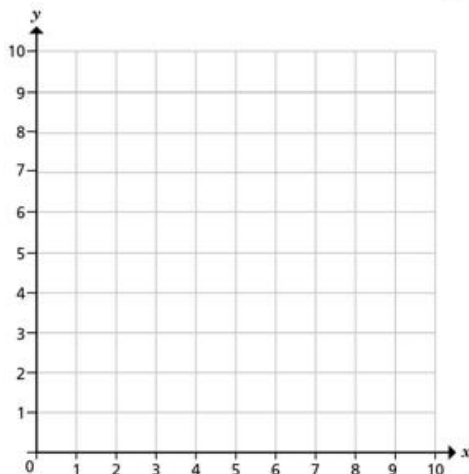
- c) Which part of the coordinate stayed the same? y
 d) Which part of the coordinate changed? x
 e) Point E has the coordinates (12, 4). It is translated 3 to the right.

What are the coordinates of the translated point? (15, 4)

If you are feeling confident, have a go at translating coordinates left or right, then up or down.

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 right and 3 down.

(,)

- b) (9, 2) is translated 8 left and 5 up.

(,)

- c) (10, 0) is translated 10 left.

(,)

- d) (0, 4) is translated 6 right and 4 down.

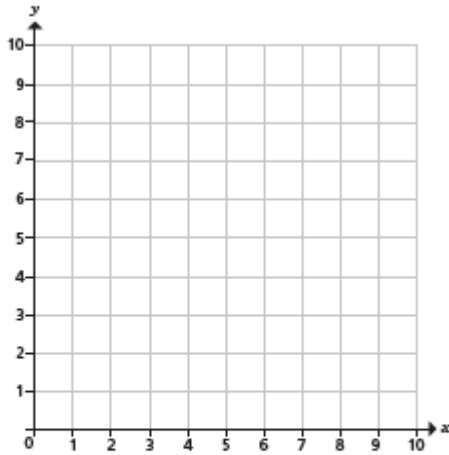
(,)

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

Answer

- 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 right and 3 down. (6 , 3)
- b) (9, 2) is translated 8 left and 5 up. (1 , 7)
- c) (10, 0) is translated 10 left. (0 , 0)
- d) (0, 4) is translated 6 right and 4 down. (6 , 0)

Have you managed to spot a pattern with how the coordinates change for translations? If so, what is it?

Activity - Complete the sheet for lesson 2.

LO: To give translations via coordinates.

This activity is a little different. Your teachers should have set you a 'to do' on Purple Mash. This is to practice what you have been doing on translations this week.

Complete the quiz. When you have done it, you should be able to select to hand it in so your teacher can see the brilliant work you have completed.

When you have completed your activity fill in this self assessment grid. How confident are you completing translations?

I think	I can:
	Write a co-ordinate for a point.
	Plot a co-ordinate on a grid.
	Write the co-ordinates of a shape.
	Translate a shape 1 way.
	Translate a shape 2 ways.

LO: To multiply and divide by 10, 100 and 1000.

We have finished our work on position and direction and are moving onto converting measurements. Before we look at this, we need to recap on what happens to the number when we multiply and divide by 10, 100 and 1000.

Watch the video at the top of this BBC bitesize daily lesson:

<https://www.bbc.co.uk/bitesize/topics/z36tyrd/articles/z2fkwx>

There are also written notes for you to read through and a quiz to try.

Now, have a go at this fluency exercise:

Multiply the following numbers by 10, 100 and 1000 to complete the table.

	x 10	x 100	x 1000
5.7			
23.02			
0.92			
0.306			
24.67			

Divide the following numbers by 10, 100 and 1000 to complete the table.

	÷ 10	÷ 100	÷ 1000
43			
219			
703			
64.8			
2560			

The answers are as follows:

Multiply the following numbers by 10, 100 and 1000 to complete the table.

	x 10	x 100	x 1000
5.7	57	570	5700
23.02	230.2	2302	23 020
0.92	9.2	92	920
0.306	3.06	30.6	306
24.67	246.7	2467	24 670

Divide the following numbers by 10, 100 and 1000 to complete the table.

	÷ 10	÷ 100	÷ 1000
43	4.3	0.43	0.043
219	21.9	2.19	0.219
703	70.3	7.03	0.703
64.8	6.48	0.648	0.0648
2560	256	25.6	2.56

Activity - Play the game from activity lesson 4 with an adult or older brother or sister

LO: To convert metric measures involving length (km and m)

How many metres in a kilometre?

What does the prefix kilo mean? (This might help you)

There are 1000m in a km so we can use our knowledge from multiplying and dividing by 1000 to help us with our conversions today.

To calculate how many metres in 4km, you have to complete the calculation 4×1000 . Think back to your work yesterday:

Th Thousands	H Hundreds	T Tens	O Ones	• Decimal point	t tenths	h hundredths
4	0	0	4			

You will see that the 4 has moved 3 places left when we multiply by 1000, then zeros have been added as place holders.

So $4\text{km} = 4000\text{m}$

To calculate how many km is equal to 3500m we need to do the calculation $3500 \div 1000$. This time the digits will move 3 places to the right as below:

Th Thousands	H Hundreds	T Tens	O Ones	• Decimal point	t tenths	h hundredths
3	5	0	0			
			3	.	5	

We do not need to write any zeros which come at the end after the decimal point.

So $3500\text{m} = 3.5\text{km}$

Have a go at filling in this grid: (Remember to draw up a quick place value mat if you need to use a calculation for the conversion.)

Kilometres	Metres
	180
	485
0.95	
0.101	
	212
0.312	
0.098	
	251
	981
0.616	

These are the answers:

Kilometres	Metres
0.18	180
0.485	485
0.95	950
0.101	101
0.212	212
0.312	312
0.098	98
0.251	251
0.981	981
0.616	616

Activity - Have a go at the converting measurement activity sheet for Lesson 5