



Year Five Maths Lesson 5



Fluency Starter

- Keep up your daily practice of 5 a day <https://corbettmathsprimary.com/5-a-day/> and challenge yourself to Bronze, Silver, Gold or Platinum!
- Or Complete Flashback 4 for your daily starter (on the next slide).
- Log on to Doodlemaths for 15 minutes each day and try and keep in the Green Zone.
- There are also some Maths activities on Purple Mash to complete.

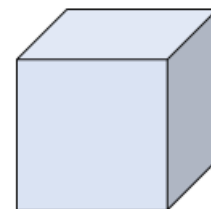
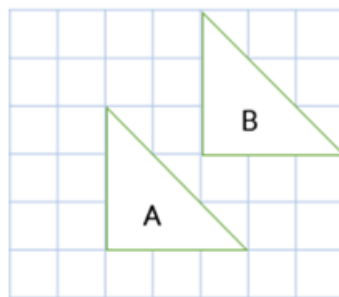


Fluency Starter

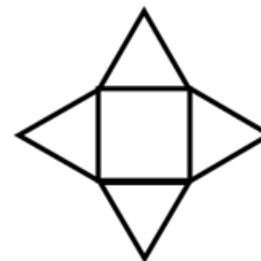
Flashback 4

Year 5 | Week 8 | Day 5

- 1) Describe the translation of shape A to shape B.



- 2) What 3-D shape will this net make?



- 3) How many right angles are there in a full turn?
- 4) Divide $564 \div 3$

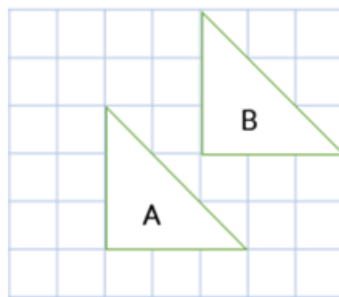


Fluency Starter Answers

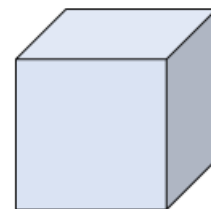
Flashback 4

Year 5 | Week 8 | Day 5

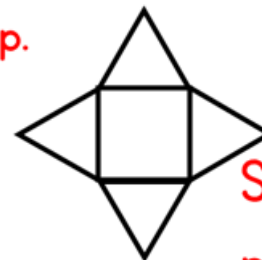
- 1) Describe the translation of shape A to shape B.



Shape A has been translated 2 spaces to the right and 2 spaces up.



- 2) What 3-D shape will this net make?



Square-based pyramid

- 3) How many right angles are there in a full turn?

4

- 4) Divide $564 \div 3$ 188

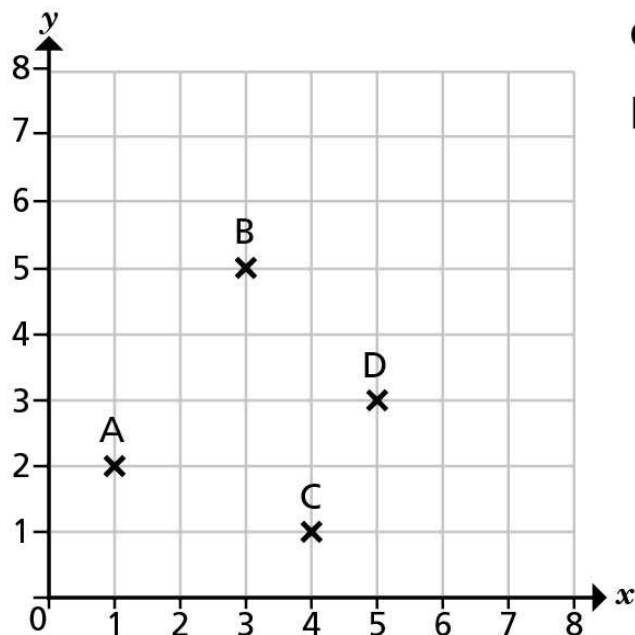


Lesson Aims

- I can translate coordinates

Translation with coordinates

- 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

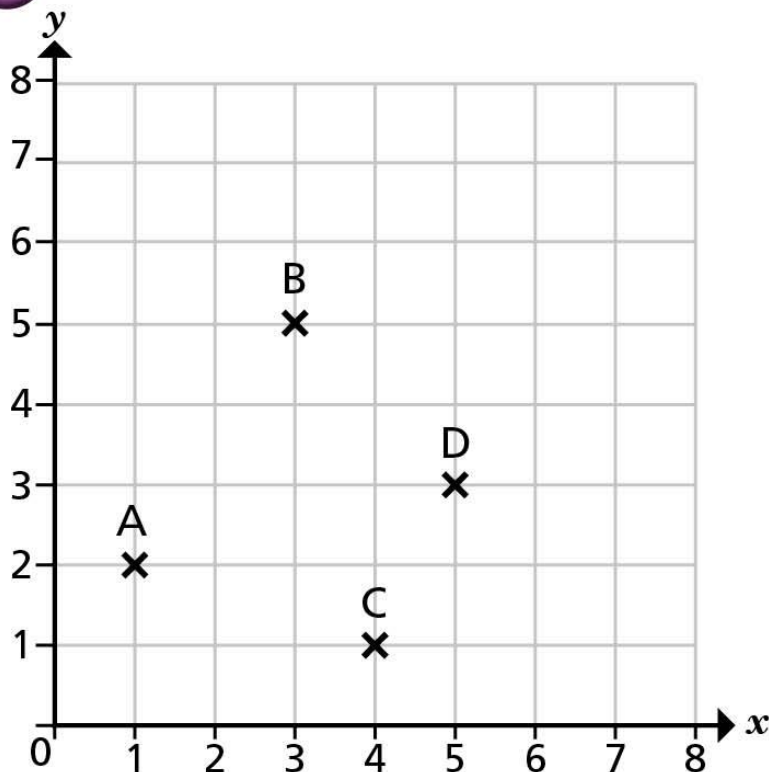
c) Which part of the coordinate stayed the same? _____

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? (,)

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



a) Translate each point 2 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?





2

c) What has stayed the same in each coordinate? _____

d) What has changed? _____

e) Point E has the coordinates (12, 4).

It is translated 2 up.

What are the coordinates of the translated point?

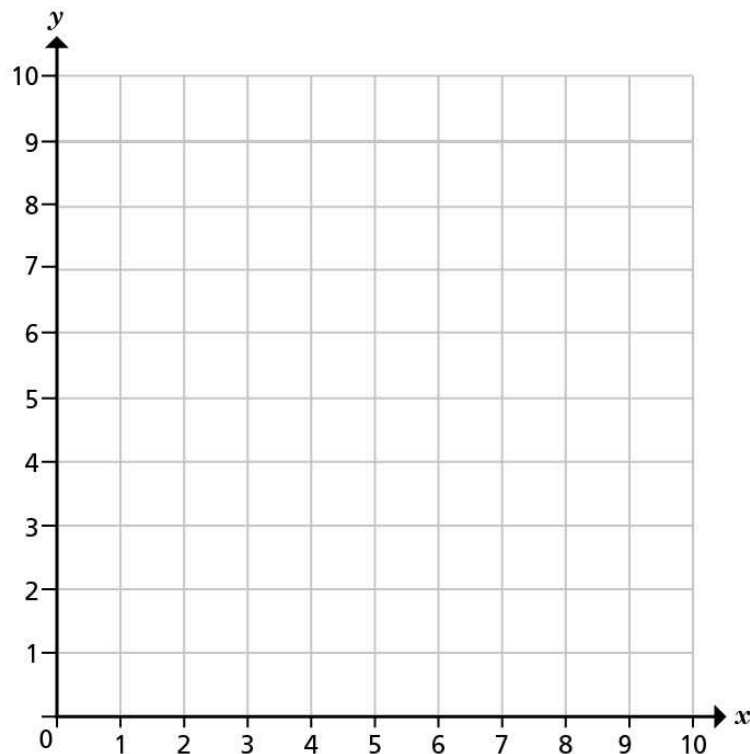
(,)



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 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?



4

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

The rectangle is translated 10 left and 2 down.

What are the coordinates of the vertices now?

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

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

It is translated 21 right and 9 down.

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

Alex

(3, 38)

Amir

(33, 10)

Who do you agree with?

Talk about it with a partner.





6

Point X has the coordinates (17, 21).

After being translated, it now 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. _____

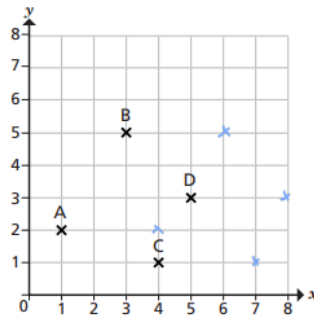


Fluency Activity Answers

Translation with coordinates

White
Rose
Maths

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



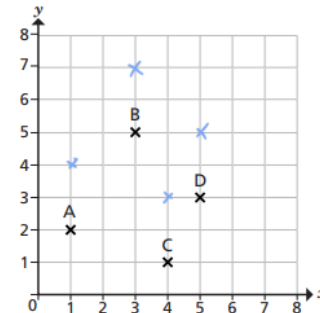
- a) Translate each point 3 to the right.
b) Complete the table to show the coordinates of each point before and after the translation.

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. 15 4

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



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

Point	Coordinates before	Coordinates after
A	(1, 2)	(1, 4)
B	(3, 5)	(3, 7)
C	(4, 1)	(4, 3)
D	(5, 3)	(5, 5)

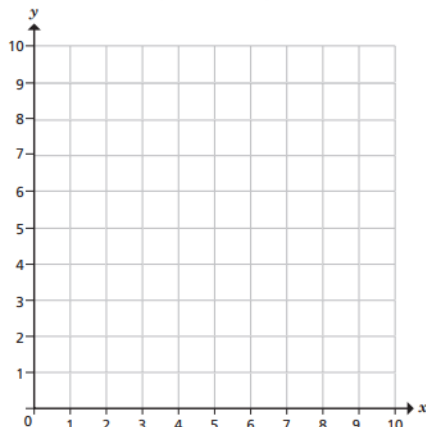
What do you notice?

- c) What has stayed the same in each coordinate? x
d) What has changed? y
e) Point E has the coordinates (12, 4).
It is translated 2 up.
What are the coordinates of the translated point? 12 6



Fluency Activity Answers

- 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. $(6, 0)$

Is it possible to work this 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 left and 2 down.
What are the coordinates of the vertices now?

$(8, 2)$ $(8, 5)$ $(13, 2)$ $(13, 5)$



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

It is translated 21 right and 9 down.

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

Alex $(3, 38)$

Amir $(33, 10)$

Who do you agree with?

Amir

Talk about it with a partner.

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

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

Describe the translation.

6 to the left and 14 up

- 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.

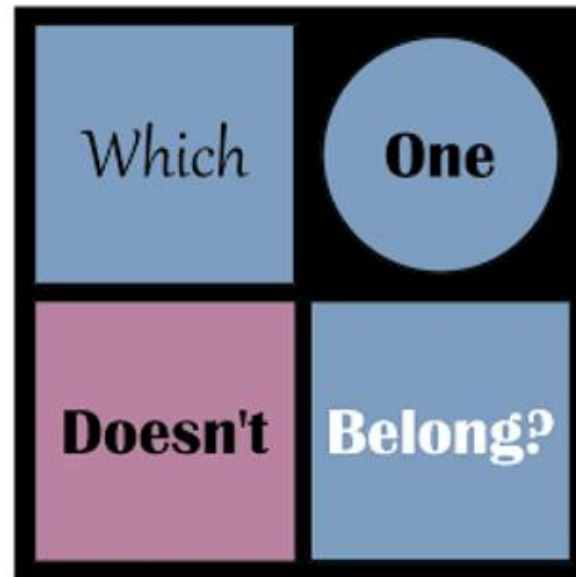
Before	After
$(2, 7)$	(5, 13)
$(2, 14)$	(5, 20)
(11, 7)	(14, 13)
$(11, 14)$	(14, 20)
$(7, 19)$	(10, 25)

- a) Complete the table.
b) Describe the translation.

3 to the right and 6 down



Problem Solving





Problem Solving

- How many ways can you find?





Problem Solving

- How many different ways did you find?
- Can you explain your reasoning?