

Year 4 Maths, 8th July
2020

NUMBER PRACTICE

- ▶ Draw bar models to show:
- ▶ A: 3×16
- ▶ B: $48 \div 6$
- ▶ C: $\frac{1}{5}$ of 350
- ▶ D: The difference between 41 and 86

NUMBER PRACTICE answers

▶ Draw bar models to show:

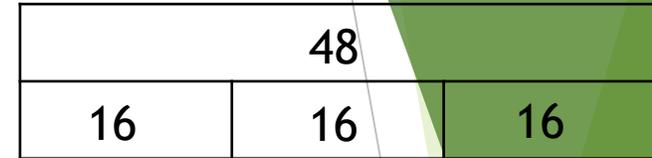
▶ A: 3×16

▶ B: $48 \div 6$

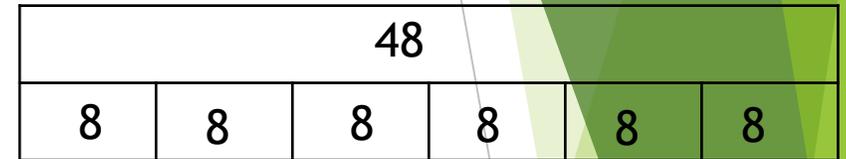
▶ C: $\frac{1}{5}$ of 350

▶ D: The difference between 41 and 86

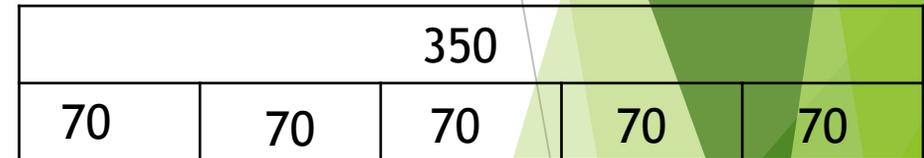
A



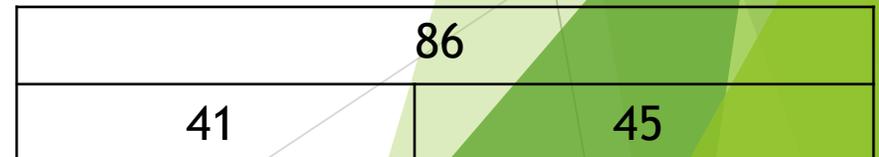
B



C



D



I CAN TRANSLATE SHAPES ON A GRID

- ▶ SOME WILL EVEN work out the original co-ordinates of a shape before translation
- ▶ SOME will give co-ordinates for vertices of shapes before and after translation
- ▶ MOST will give co-ordinates before and after translations
- ▶ ALL will understand translation in the context of shape

RECALL

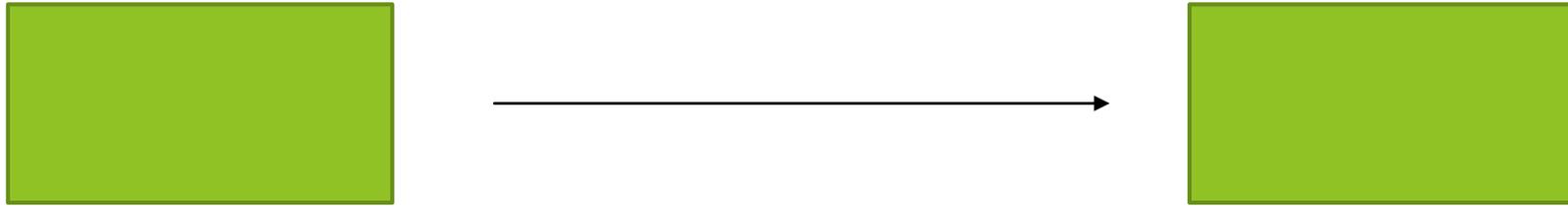
- ▶ Today we are going to be translating shapes on a grid. Translating just means moving. When we translate a shape, it doesn't grow or shrink, it doesn't rotate or reflect... we just move it!

For example, look at this star. I have translated it by moving it to the right. It hasn't changed shape or size, it hasn't rotated or reflected... it's just moved!

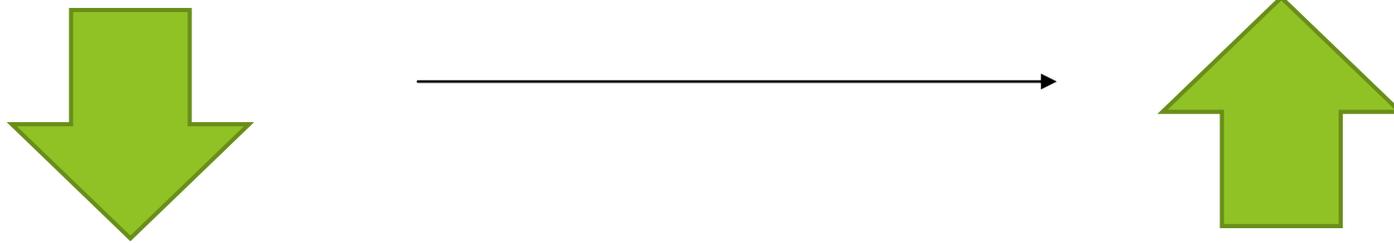


TRANSLATION or something else?

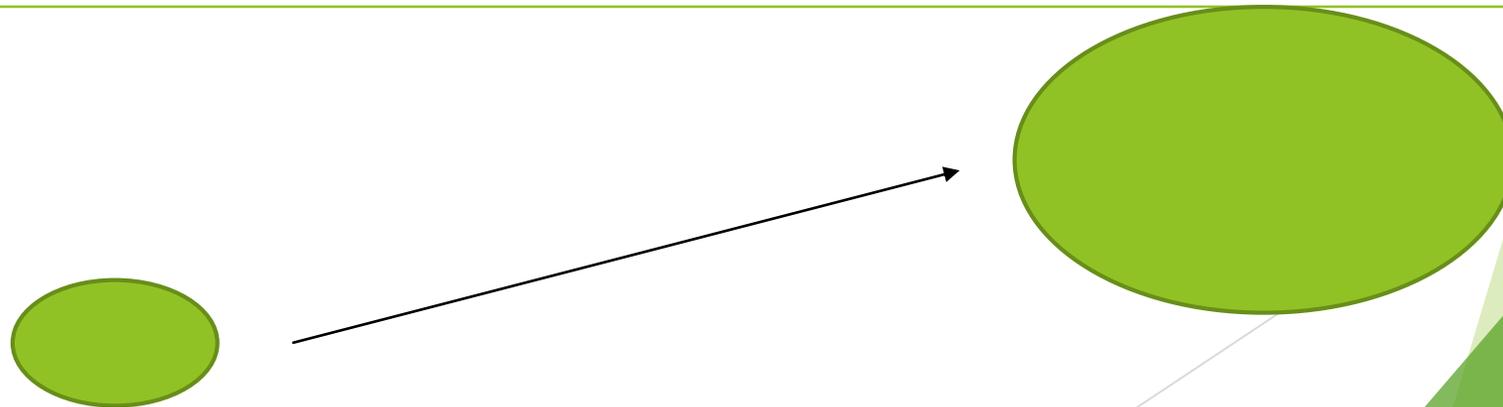
▶ 1:



2



3



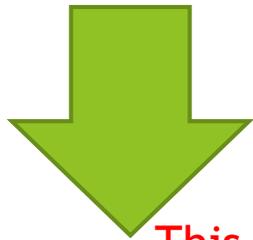
TRANSLATION or something else?

▶ 1:



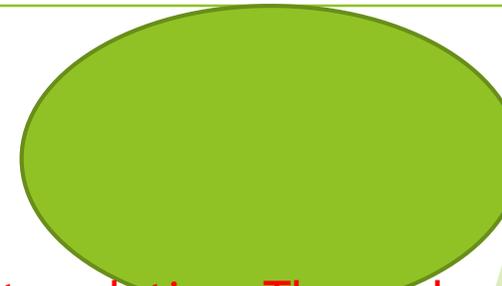
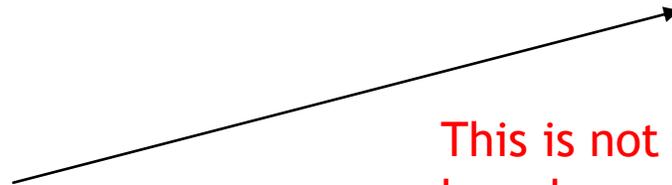
This is a translation. The rectangle has been moved to the right.

2



This is not a translation. The arrow has rotated so that it is pointing in a different direction. In a translation, the shape does not rotate.

3



This is not a translation. The oval has changed size.

GUIDED PRACTICE

On this grid, star A has been translated by moving it into position B.

What are the co-ordinates of each star?

Star A = (____,____)

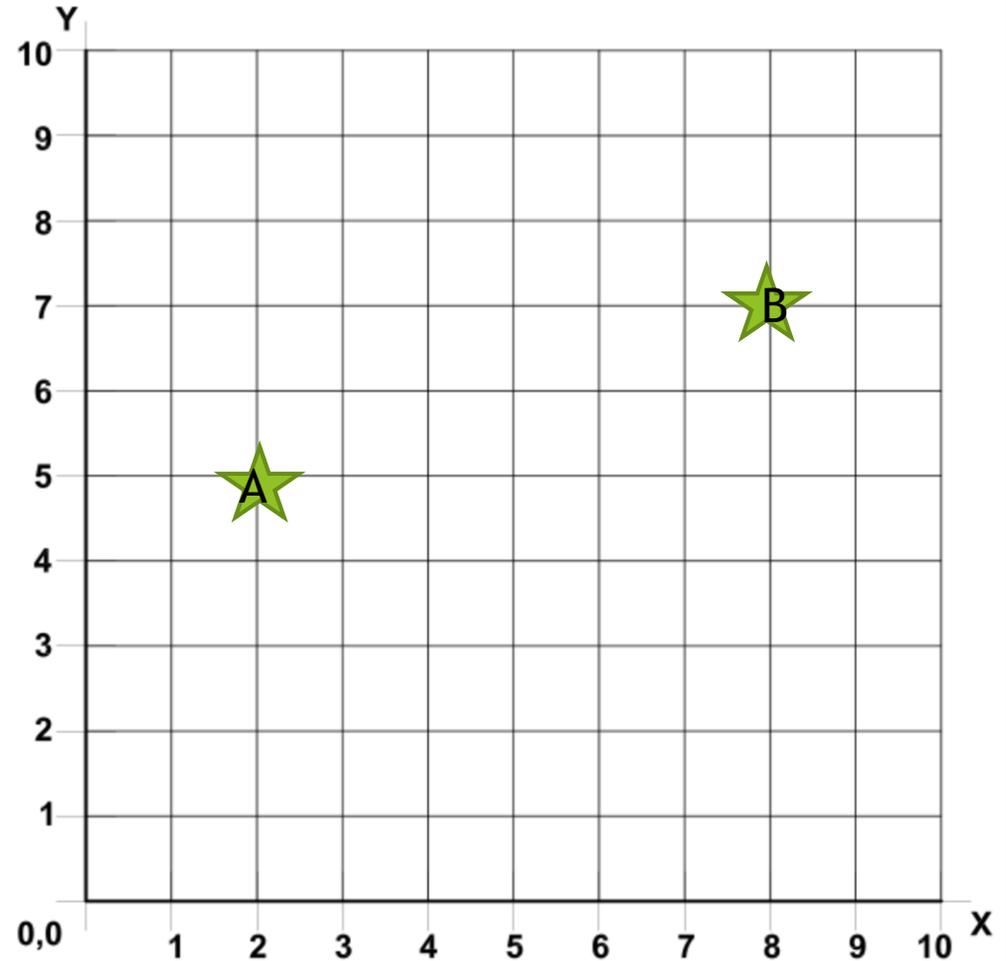
Star B = (____,____)

How many places to the right did star A move?

How many places up did star A move?

Complete the following sentence:

The star has been translated ____ squares to the right and ____ squares up.



GUIDED PRACTICE answers

On this grid, star A has been translated by moving it into position B.

What are the co-ordinates of each star?

Star A = (2,5)

Star B = (8,7)

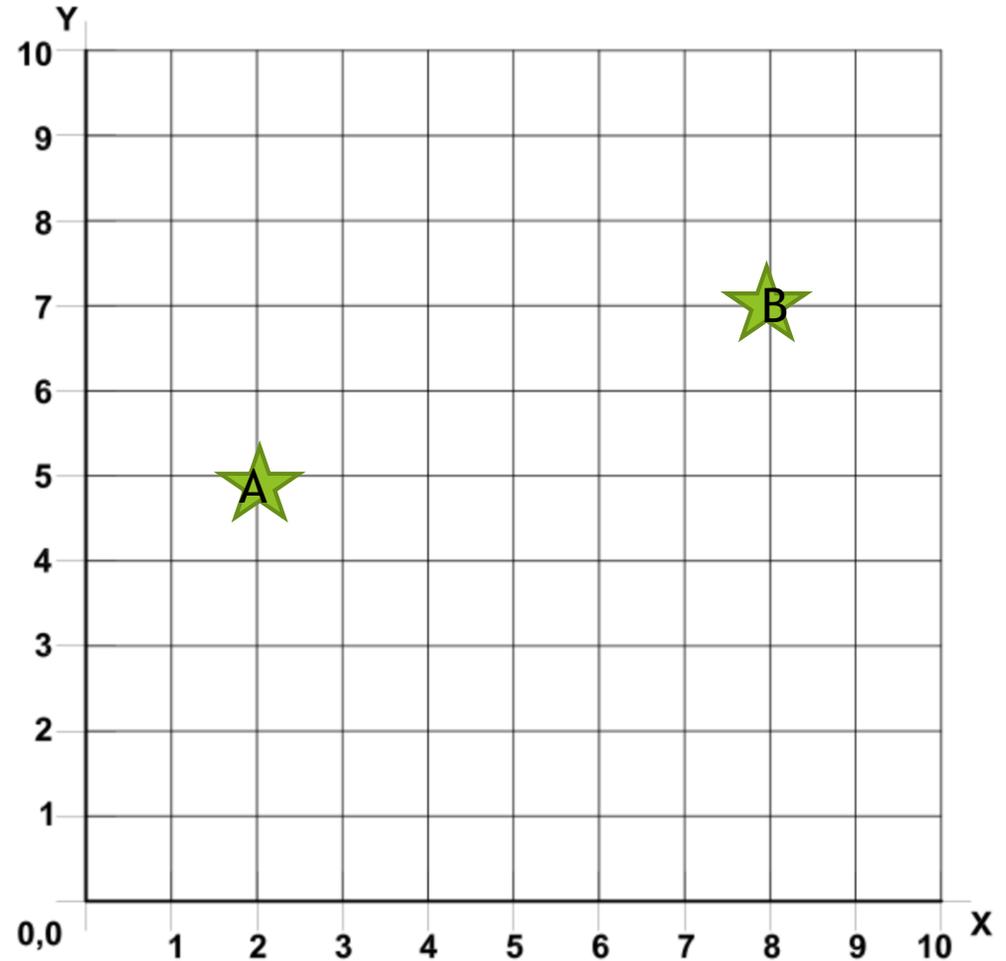
How many places to the right did star A move? 6

How many places up did star A move? 2

Complete the following sentence:

The star has been translated 6 squares to the right and 2 squares up.

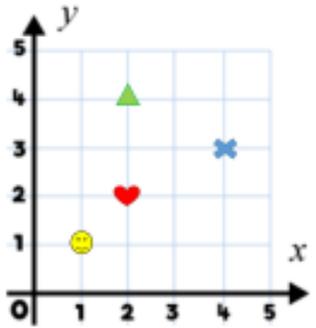
Translation: 6 right, 2 up



INTELLIGENT PRACTICE

► One chilli

Write the co-ordinates for each shape:



♥ = (__ , __)

✕ = (__ , __)

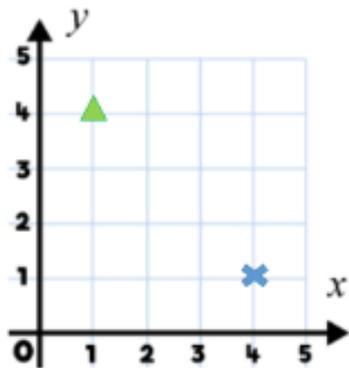
▲ = (__ , __)

😊 = (__ , __)

Two chillies

Translate ▲ 2 right and 3 down.
Record the co-ordinates before (__ , __)
and after (__ , __)

Translate ✕ 3 left and 2 up.
Record the co-ordinates before (__ , __)
and after (__ , __)



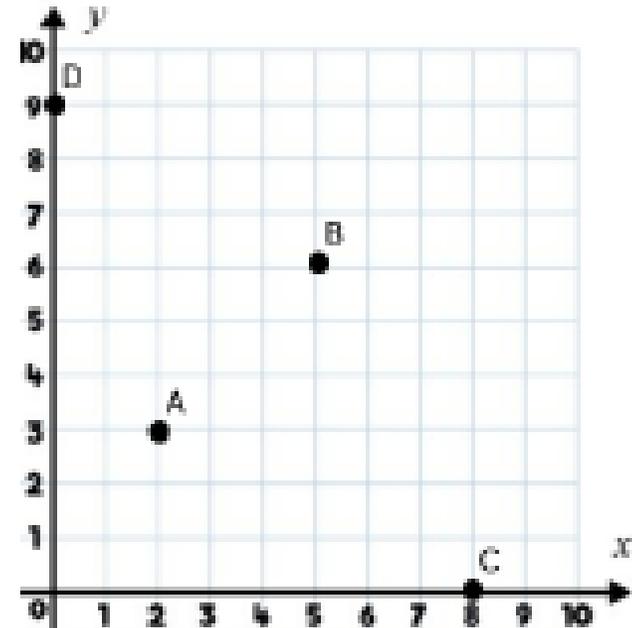
Three chillies

Translate A 6 right and 3 down.

Record the co-ordinates before (__ , __)
and after (__ , __)

Translate B and C 4 left and 3 up.

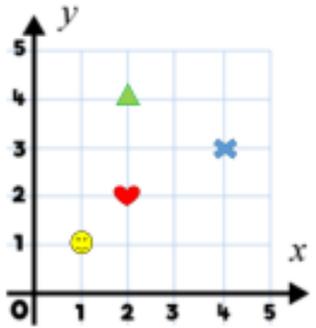
Record the co-ordinates before (__ , __)
and after (__ , __)



INTELLIGENT PRACTICE answers

► One chilli

Write the co-ordinates for each shape:



Heart = (2, 2)

Cross = (4, 3)

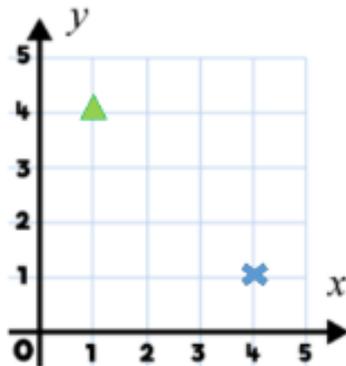
Triangle = (2, 4)

Smiley = (1, 1)

Two chillies

Translate  2 right and 3 down.
Record the co-ordinates before (1, 4)
and after (3, 1)

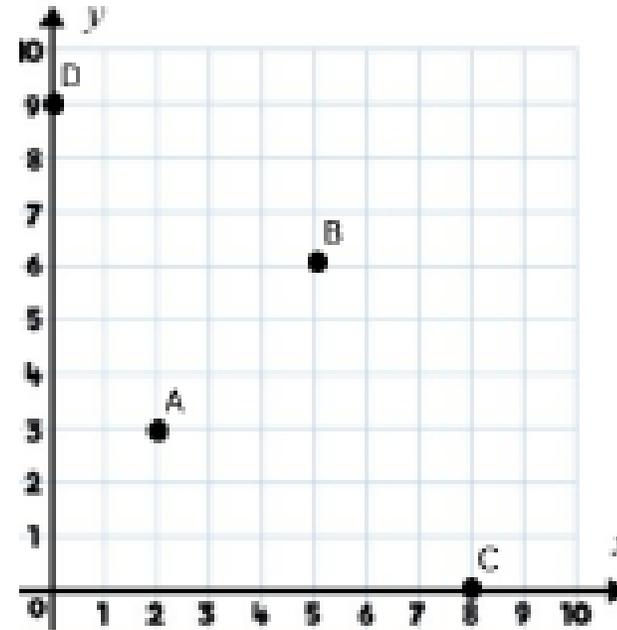
Translate  3 left and 2 up.
Record the co-ordinates before (4, 1)
and after (1, 3)



Three chillies

Translate A 6 right and 3 down.
Record the co-ordinates before (,)
and after (,)

Translate B and C 4 left and 3 up.
Record the co-ordinates before (,)
and after (,)



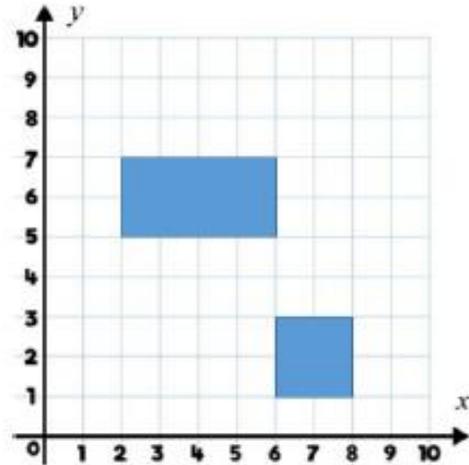
A:
Before (2, 3)
After (8, 0)

B:
Before (5, 6)
After (1, 9)

C:
Before (8, 0)
After (4, 3)

DIVE DEEPER 1

Translate the rectangle 2 left and 3 up.
Record the co-ordinates of each vertices
for the rectangle before and after the
translation.

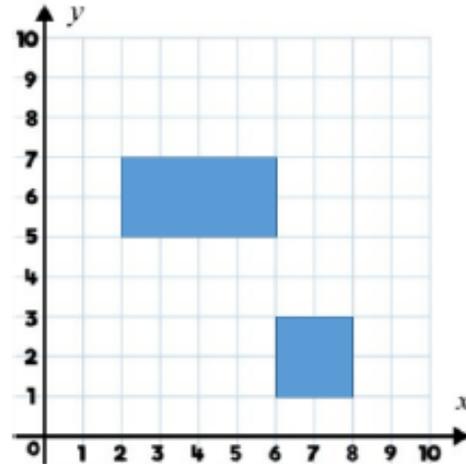


The square has already been translated 3
right and 5 down.
Record the new and original co-ordinates
of each vertices for square.

DIVE DEEPER 1

answers

Translate the rectangle 2 left and 3 up.
Record the co-ordinates of each vertices
for the rectangle before and after the
translation.



The square has already been translated 3
right and 5 down.
Record the new and original co-ordinates
of each vertices for square.

Answer:
Before:
(2,5) (2,7) (6,5)
(6,7)
After:
(0,8) (0,10) (4,8)
(4,10)

New:
(6,1) (6,3) (8,1)
(8,3)
Original:
(3,6) (3,8) (5,6)
(5,8)

DIVE DEEPER 2

Points have been placed on the following co-ordinates:

$(0,4)$ $(4,0)$ $(7,2)$ $(2,7)$

Each point is translated in the same way.
They are each translated 4 right and 7 up.
What would the new co-ordinates be?

Write a question similar to this for your partner.

DIVE DEEPER 2

answer

Points have been placed on the following co-ordinates:

(0,4) (4,0) (7,2) (2,7)

Each point is translated in the same way. They are each translated 4 right and 7 up. What would the new co-ordinates be?

Write a question similar to this for your partner.

Answer:

(4,11) (8,7)
(11,9) (6,14)

Self assessment - how did you do?

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