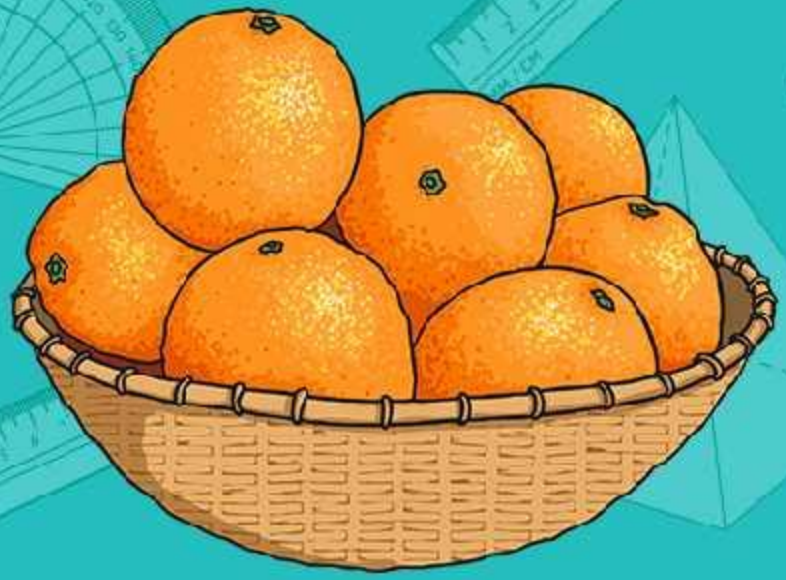
Mathematics

Measurement and Geometry

Drawing Translated Shapes



Aim

- I can draw the position of a shape following a translation.

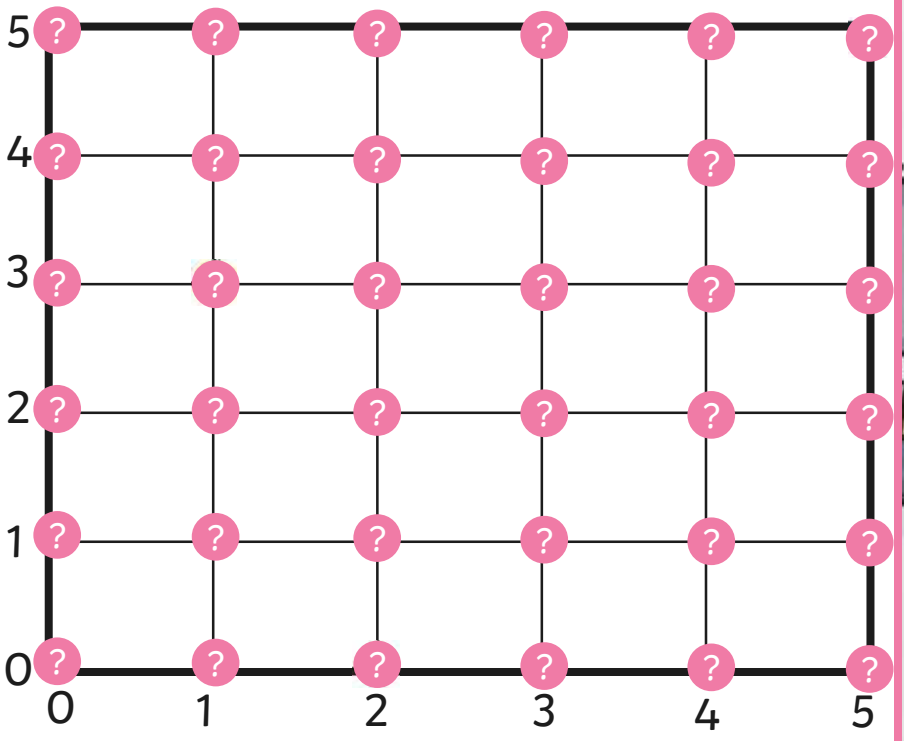
Success Criteria

- I can read, write and plot coordinates in the first quadrant.
- I know that translation is a movement from one position to another without rotation or resizing.

Fruit Smoothie Coordinates

Collect the ingredients to help the woman blend a super fruit smoothie by reading and plotting the coordinates correctly.

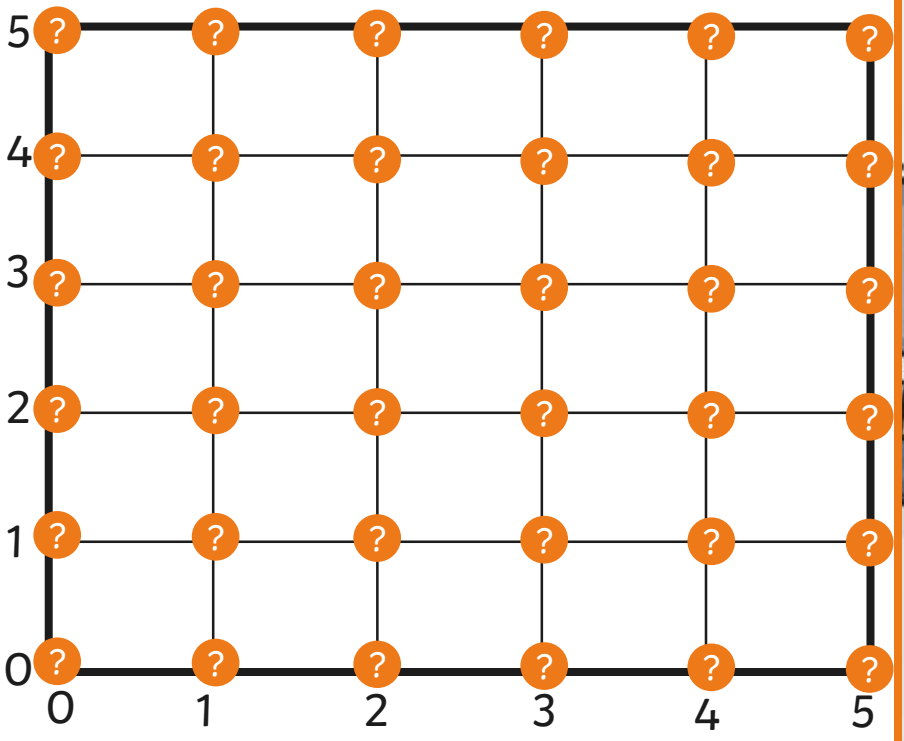
(2,0), (5,5) and (1,3)

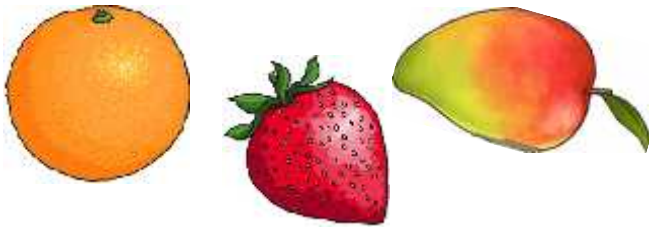


Blend Smoothie!

Raspberry, apple and cherry! Delicious!

(0,2), (5,1) and (3,4)

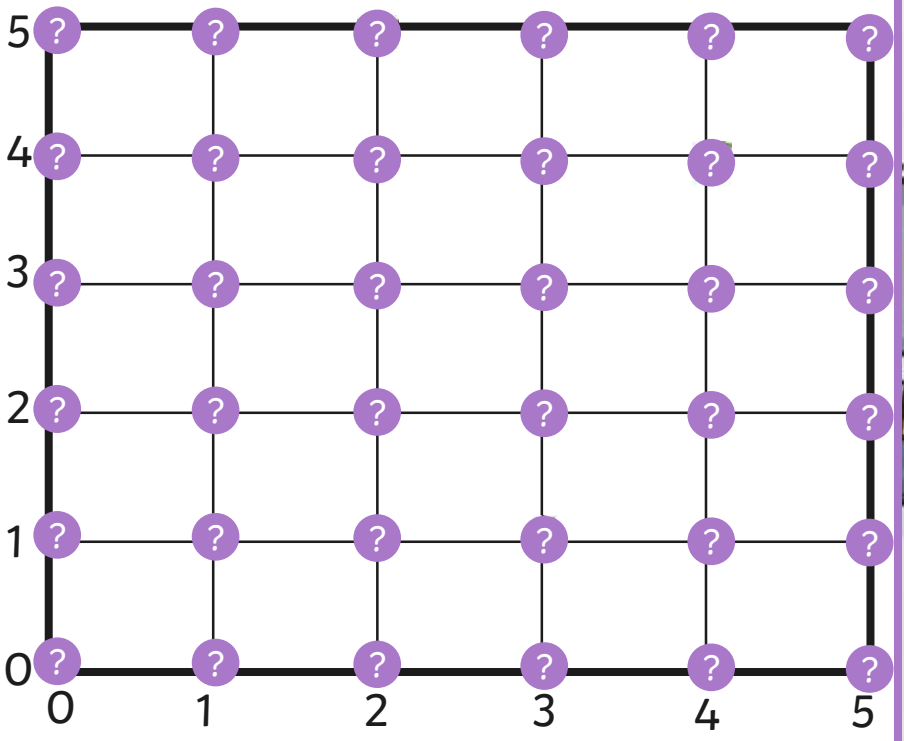




Blend Smoothie!

Mango, strawberry and orange, my favourite!

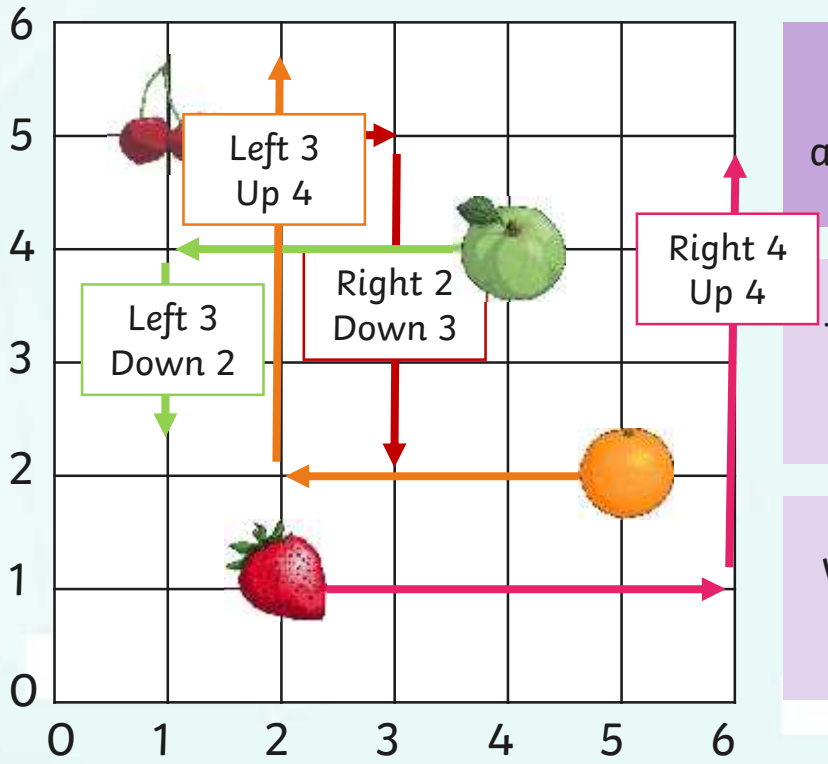
(2,5), (4,4) and (3,1)



Blend Smoothie!

Apricot, blueberries and pineapple, refreshing!

Translation on a Coordinate Grid



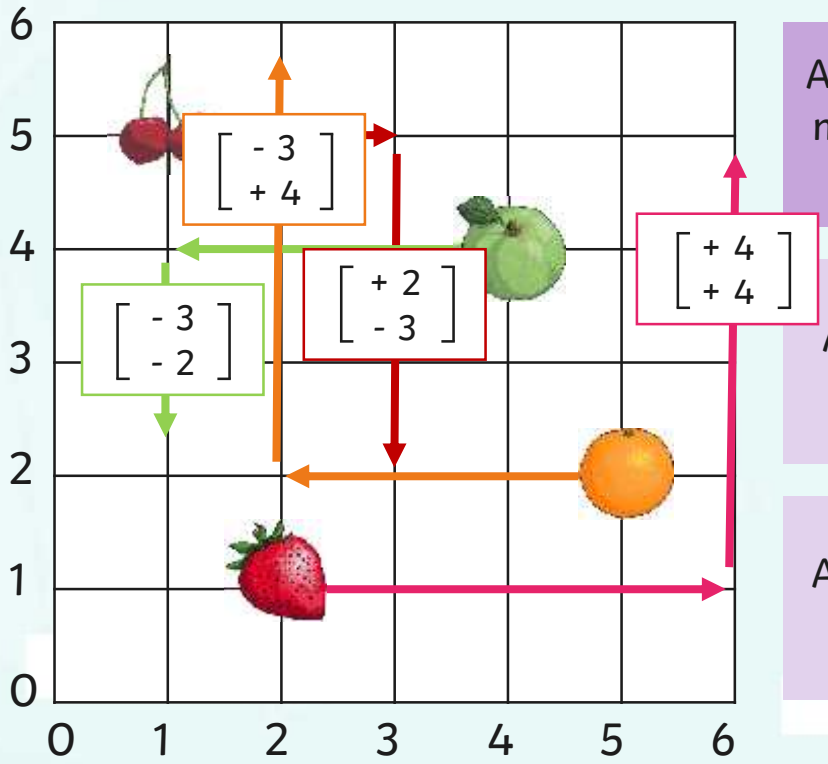
In maths, translation means moving an object from one position to another.

The object is moved without rotation, reflection or resizing.

When translating an object on a grid, it can slide up or down, left or right.

Click on the different fruit to see them being translated on the coordinate grid.

Describing Translation as a Vector



As well as describing a translation as a move to the right, left, up or down, we can also use a **vector**.

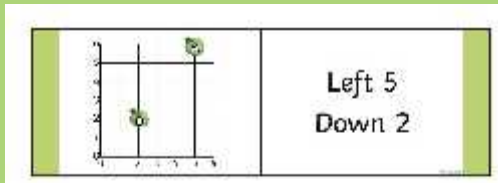
A vector describes a move to the right or up as a **positive** number (+).

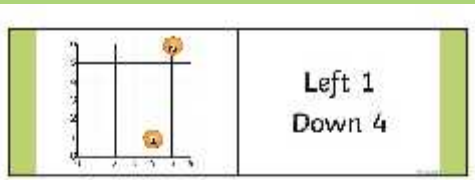
A vector describes a move to the left or down as a **negative** number (-).

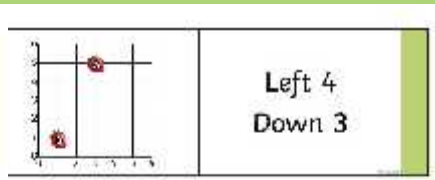
Click on the different fruit to see their translations being recorded as vectors.

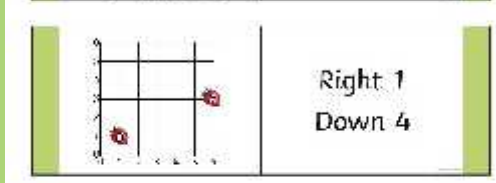
Fruit Translation Dominoes

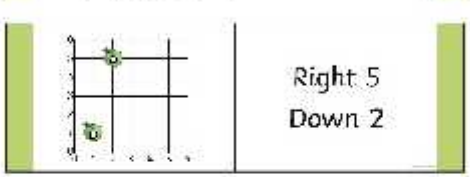
Work with a friend to match the grids and translations correctly.

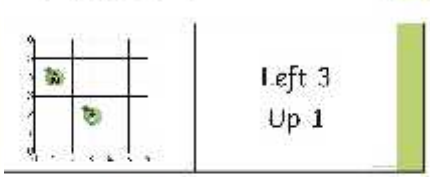


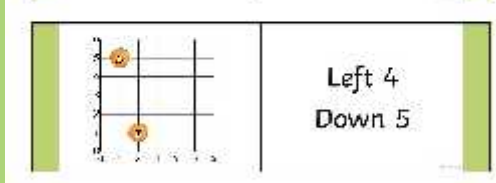


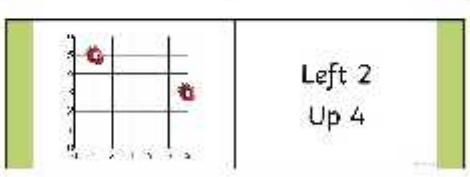


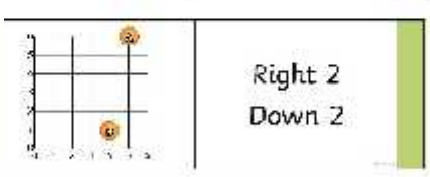


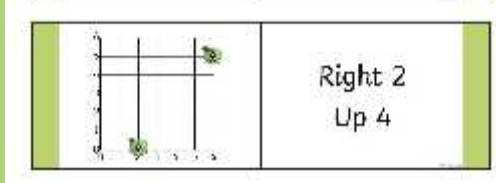


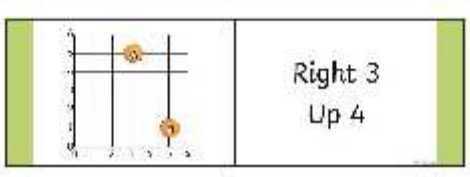


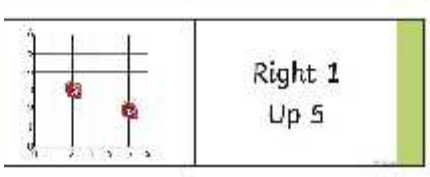




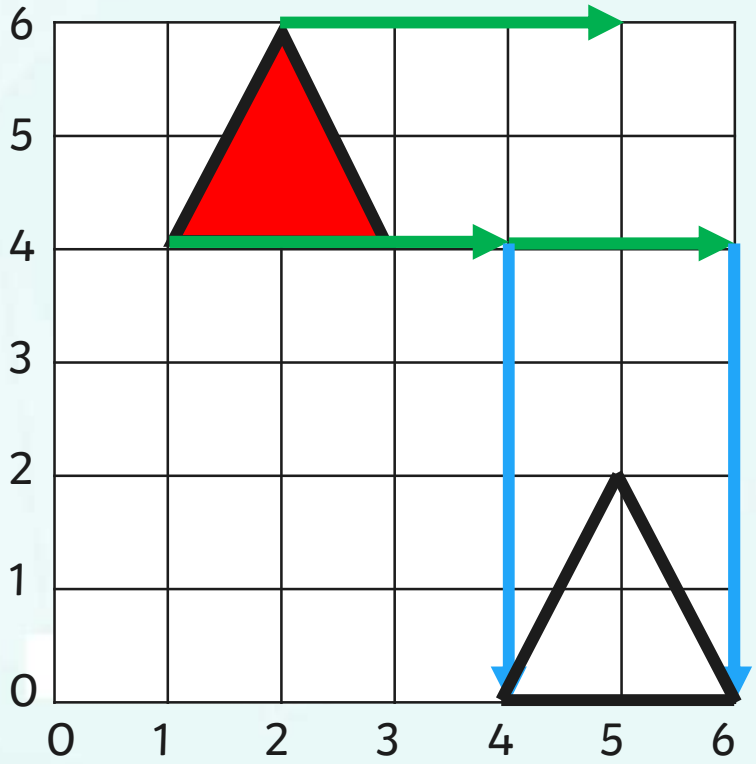








Drawing a Translated Shape



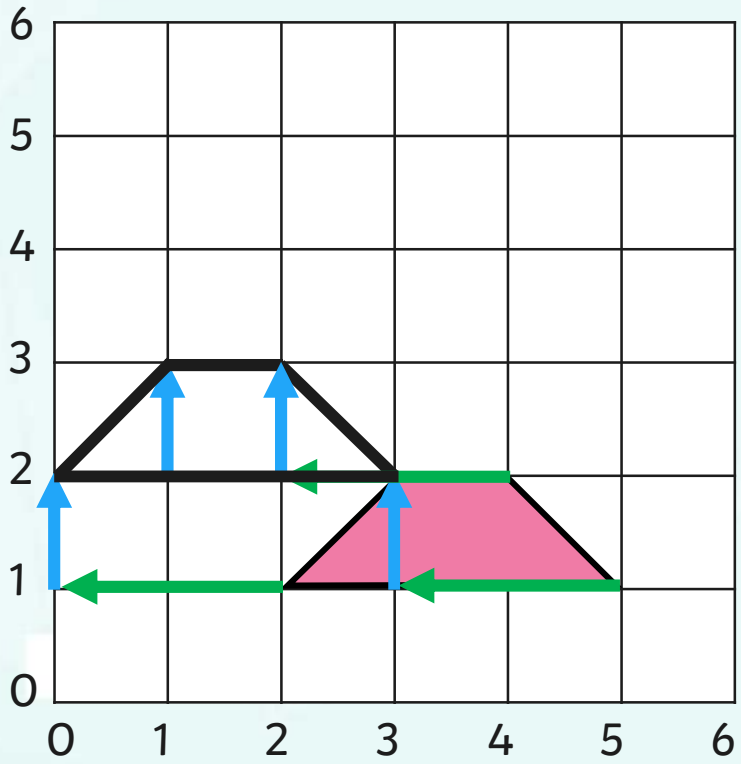
When asked to draw a 2D shape in the new position after a translation, we have to make sure that **each corner** of the shape is moved the **same direction** and the **same number**.

The **triangle** is translated

Right 3
Down 4

Click on the triangle to see how to draw it in its new position.

Drawing a Translated Shape



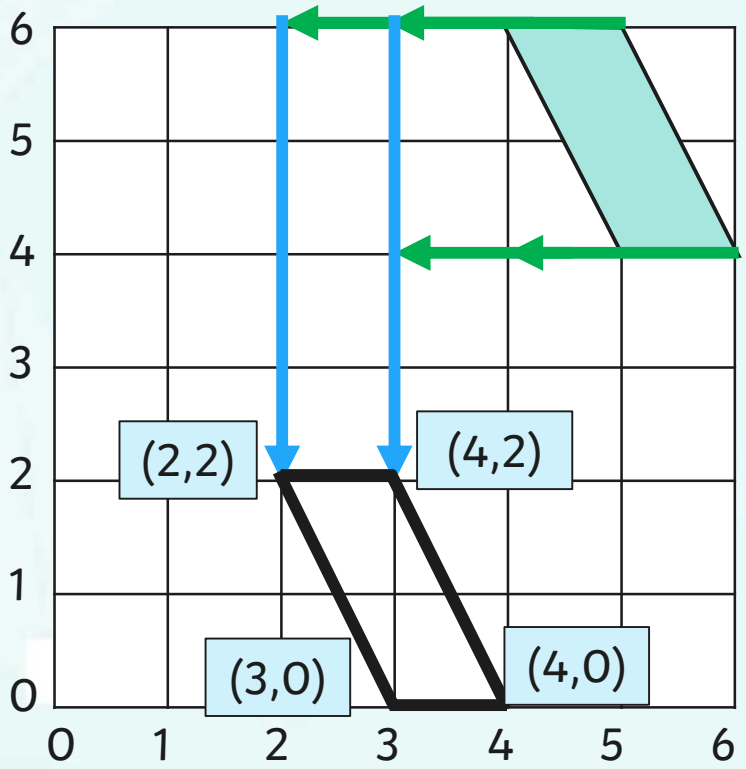
When asked to draw a 2D shape in the new position after a translation, we have to make sure that **each corner** of the shape is moved the **same direction** and the **same number**.

The **trapezium** is translated

Left 2
Up 1

Click on the trapezium to see how to draw it in its new position.

Drawing a Translated Shape



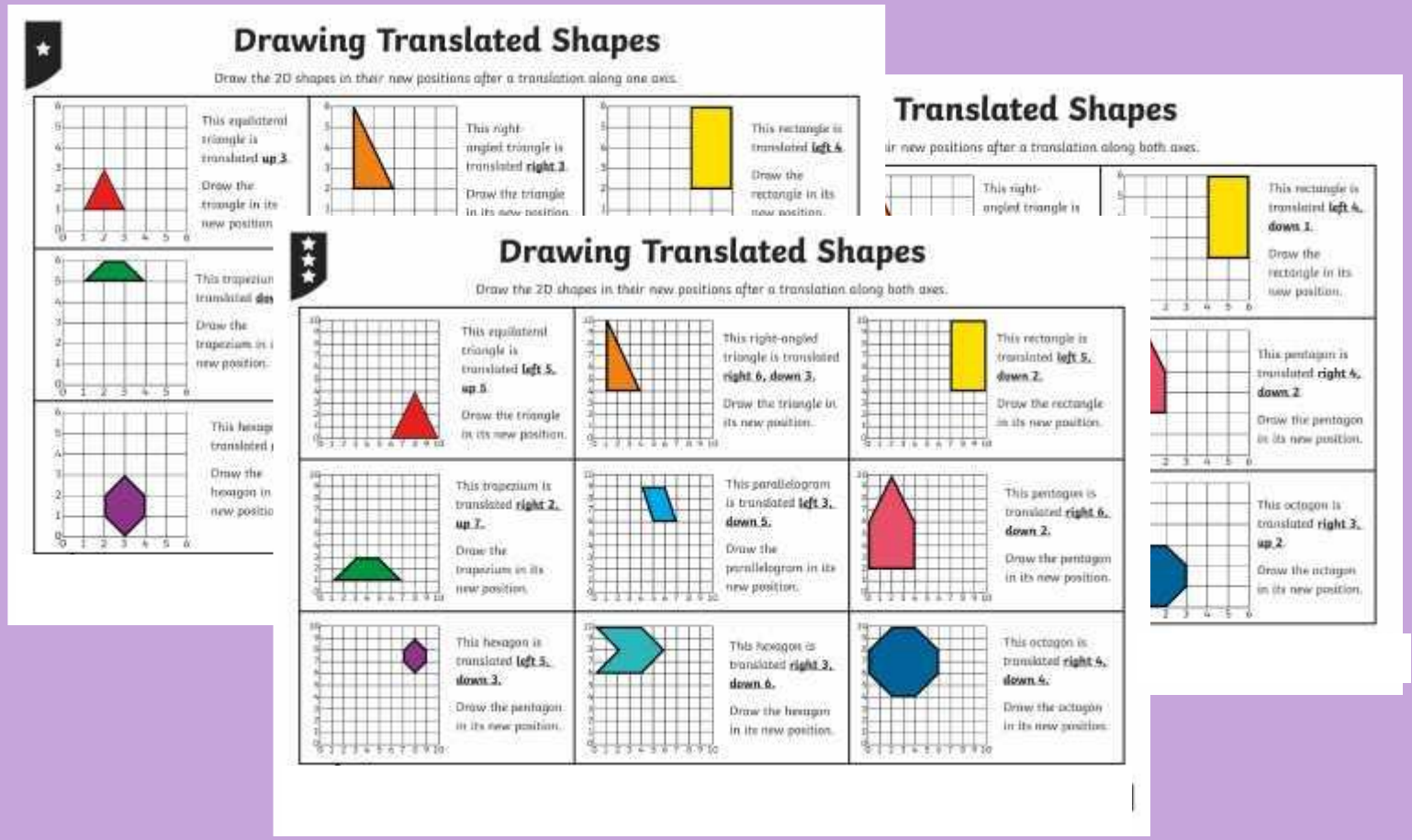
When asked to draw a 2D shape in the new position after a translation, we have to make sure that **each corner** of the shape is moved the **same direction** and the **same number**.

The **parallelogram** is translated

Left 2
Down 4

Click on the parallelogram to see how to draw it in its new position.

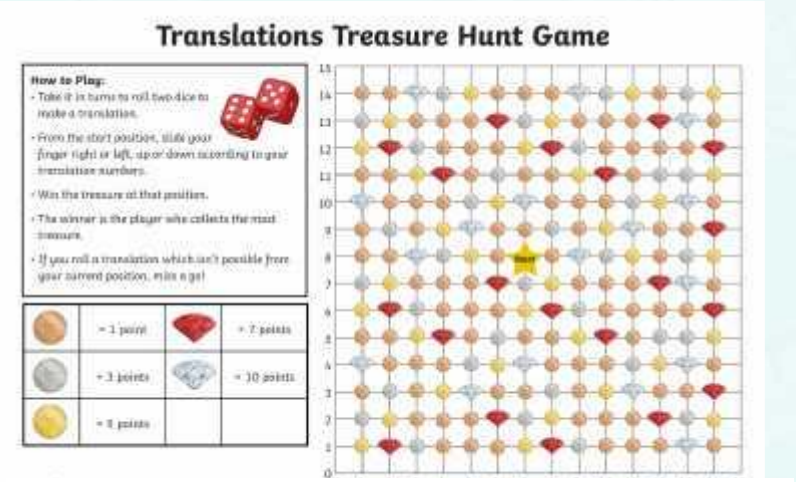
Drawing Translated Shapes



Translation Treasure Hunt

How to play:

- Take it in turns to roll two dice to make a translation.
- From the start position, slide your finger right or left, up or down according to your translation numbers.
- Win the treasure at that position.
- The winner is the player who collects the most treasure.
- If you roll a translation number which isn't possible from your current position, miss a go!

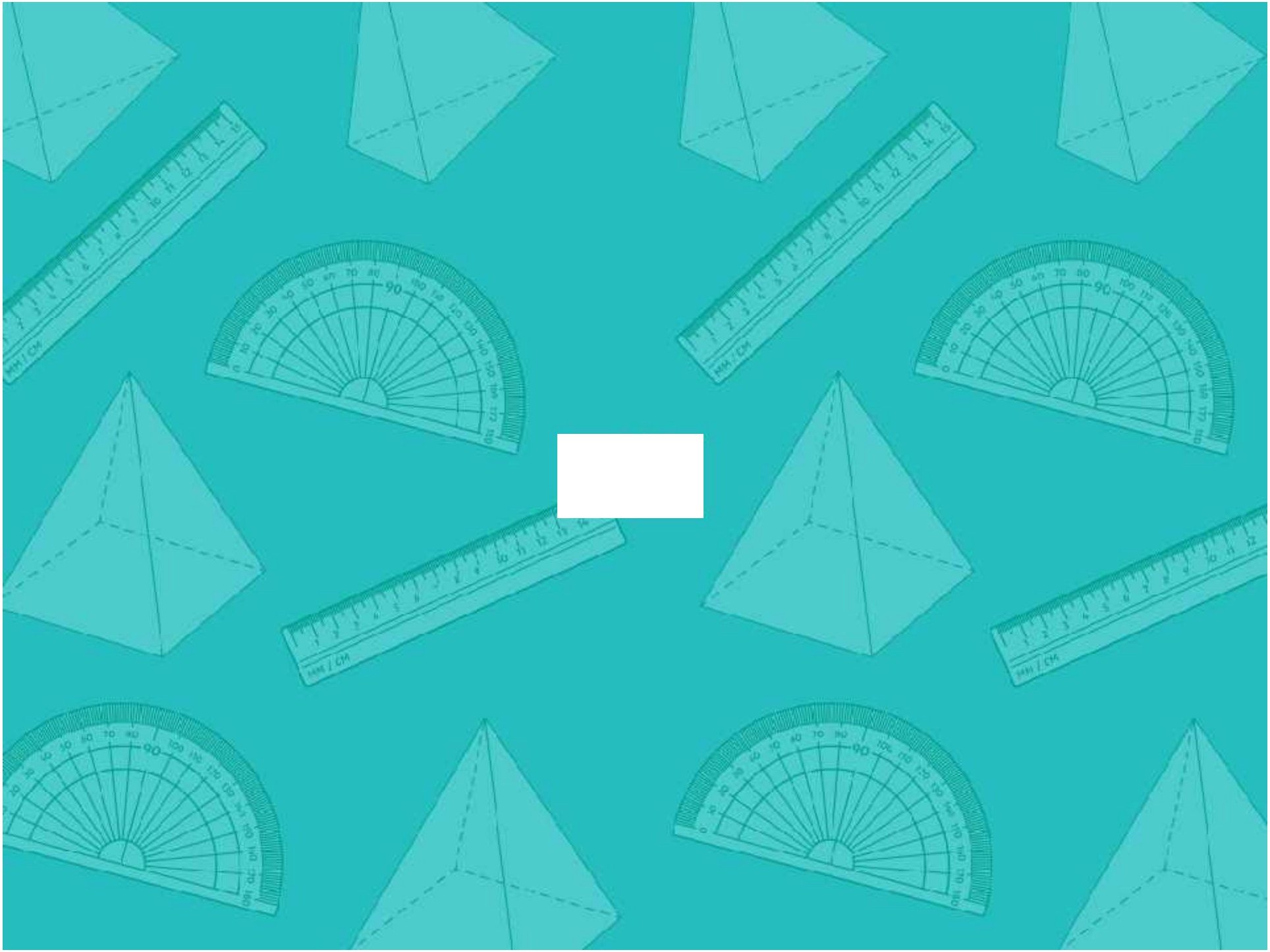


Aim

- I can draw the position of a shape following a translation.

Success Criteria

- I can read, write and plot coordinates in the first quadrant.
- I know that translation is a movement from one position to another without rotation or resizing.



Aim: I can draw the position of a shape following a translation.				**Date:**					
				Delivered By:			**Support:**		
Success Criteria	**Me**	**Friend**	**Teacher**	**T**	**PPA**	**S**	**I**	**AL**	**GP**
I can read, write and plot coordinates in the first quadrant.				**Notes/Evidence**					
I know that translation is a movement from one position to another without rotation or resizing.									

Next Steps

- _____
- _____

T	Teacher	**I**	Independent
PPA	Planning, Preparation and Assessment	**AL**	Adult Led
S	Supply	**GP**	Guided Practice

Aim: I can draw the position of a shape following a translation.				**Date:**					
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Success Criteria	**Me**	**Friend**	**Teacher**	**T**	**PPA**	**S**	**I**	**AL**	**GP**
I can read, write and plot coordinates in the first quadrant.				**Notes/Evidence**					
I know that translation is a movement from one position to another without rotation or resizing.									

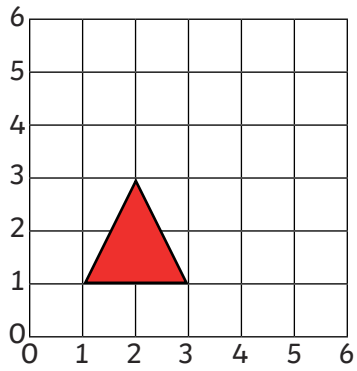
Next Steps

- _____
- _____

T	Teacher	**I**	Independent
PPA	Planning, Preparation and Assessment	**AL**	Adult Led
S	Supply	**GP**	Guided Practice

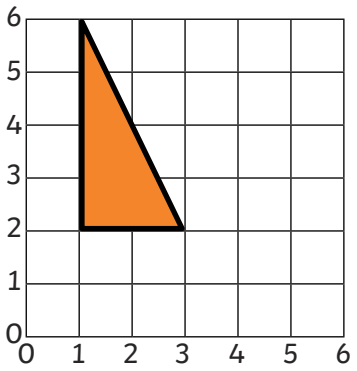
Drawing Translated Shapes

Draw the 2D shapes in their new positions after a translation along one axis.



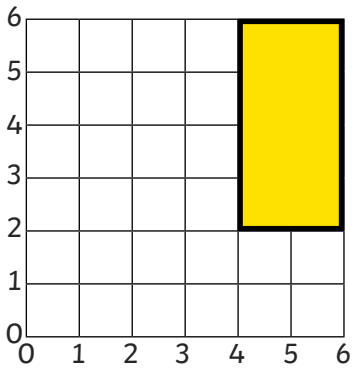
This equilateral triangle is translated **up 3**.

Draw the triangle in its new position.



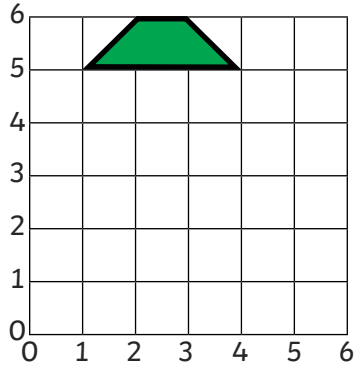
This right-angled triangle is translated **right 3**.

Draw the triangle in its new position.



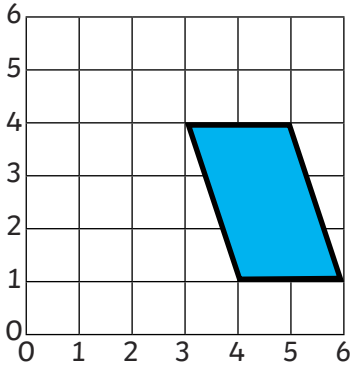
This rectangle is translated **left 4**.

Draw the rectangle in its new position.



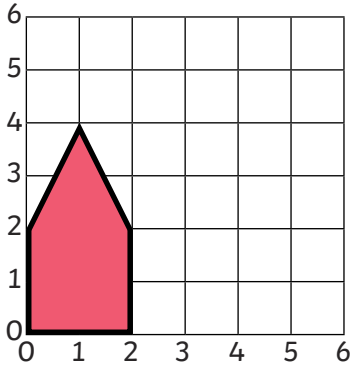
This trapezium is translated **down 2**.

Draw the trapezium in its new position.



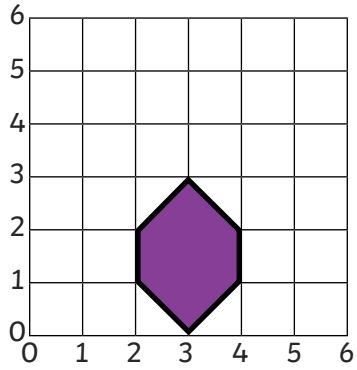
This parallelogram is translated **left 3**.

Draw the paraellelogram in its new position.



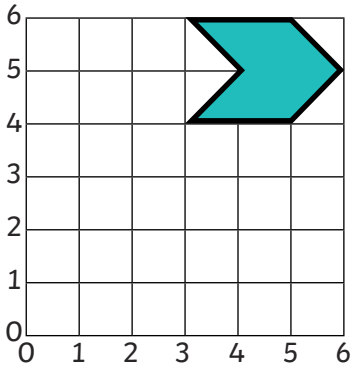
This pentagon is translated **right 3**.

Draw the pentagon in its new position.



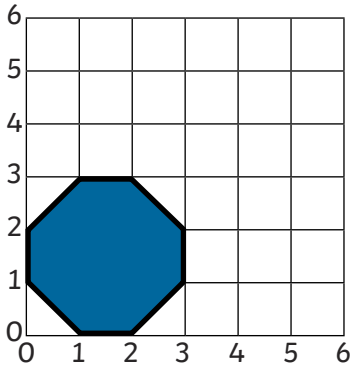
This hexagon is translated **up 3**.

Draw the hexagon in its new position.



This hexagon is translated **down 4**.

Draw the hexagon in its new position.

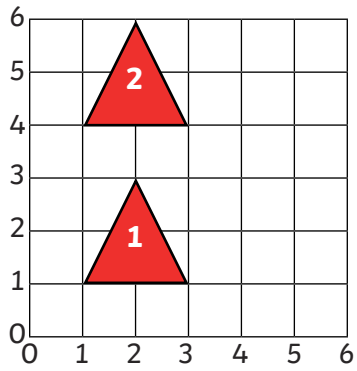


This octagon is translated **right 3**.

Draw the octagon in its new position.

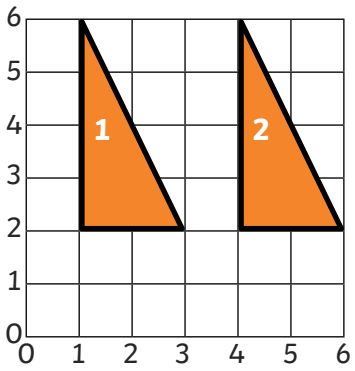
Drawing Translated Shapes Answers

Draw the 2D shapes in their new positions after a translation along one axis.



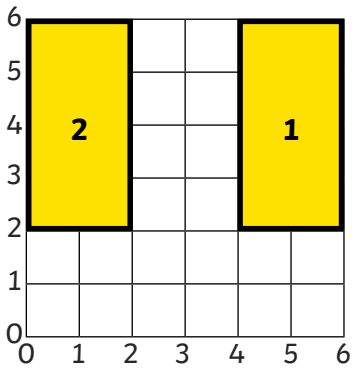
This equilateral triangle is translated **up 3**.

Draw the triangle in its new position.



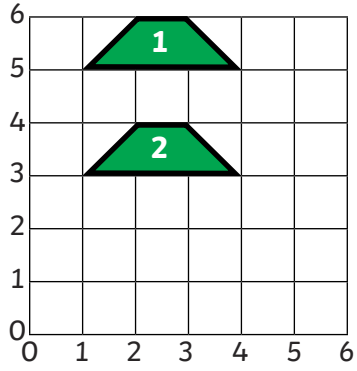
This right-angled triangle is translated **right 3**.

Draw the triangle in its new position.



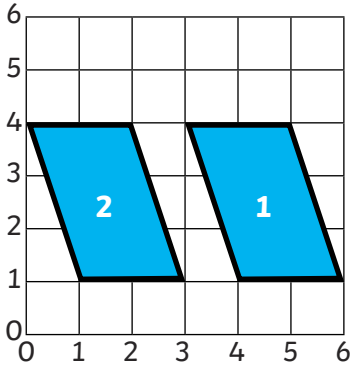
This rectangle is translated **left 4**.

Draw the rectangle in its new position.



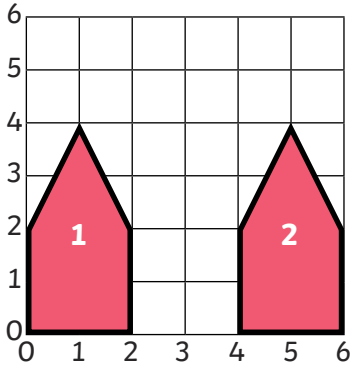
This trapezium is translated **down 2**.

Draw the trapezium in its new position.



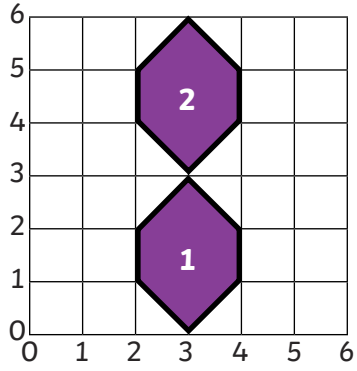
This parallelogram is translated **left 3**.

Draw the paraellelogram in its new position.



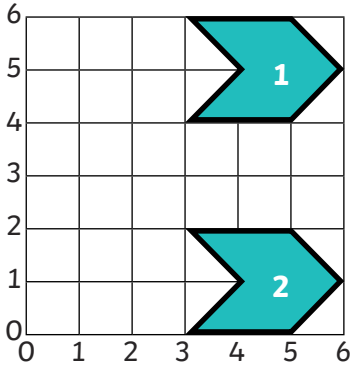
This pentagon is translated **right 3**.

Draw the pentagon in its new position.



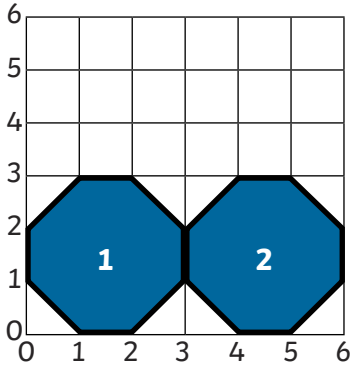
This hexagon is translated **up 3**.

Draw the hexagon in its new position.



This hexagon is translated **down 4**.

Draw the hexagon in its new position.

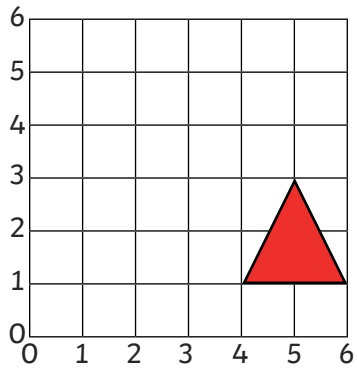


This octagon is translated **right 3**.

Draw the octagon in its new position.

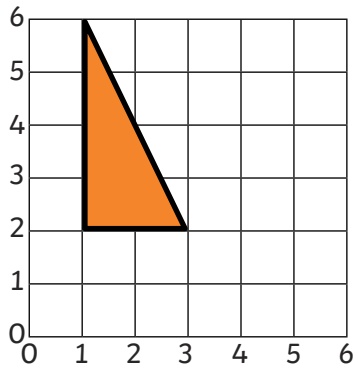
Drawing Translated Shapes

Draw the 2D shapes in their new positions after a translation along both axes.



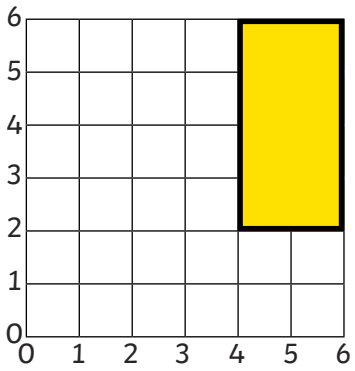
This equilateral triangle is translated **left 3, up 3**.

Draw the triangle in its new position.



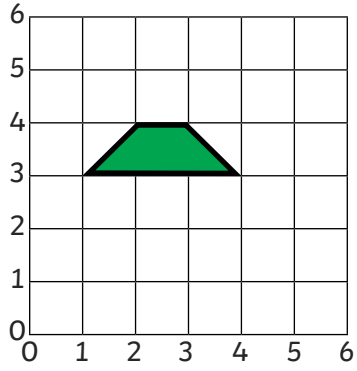
This right-angled triangle is translated **right 3, down 2**.

Draw the triangle in its new position.



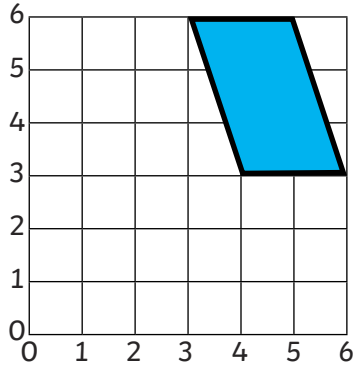
This rectangle is translated **left 4, down 1**.

Draw the rectangle in its new position.



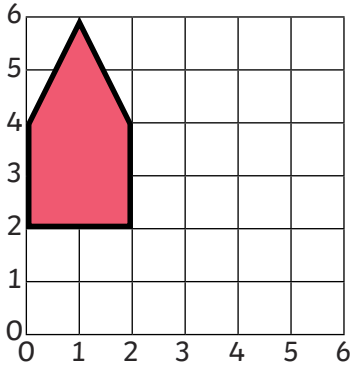
This trapezium is translated **right 2, up 2**.

Draw the trapezium in its new position.



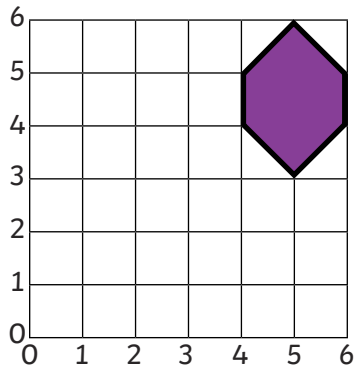
This parallelogram is translated **left 3, down 2**.

Draw the paraellelogram in its new position.



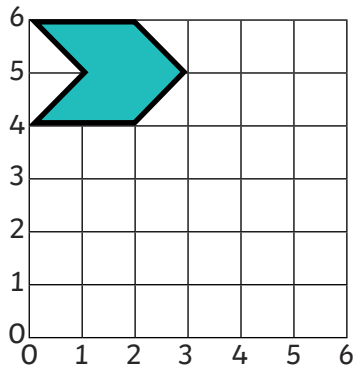
This pentagon is translated **right 4, down 2**.

Draw the pentagon in its new position.



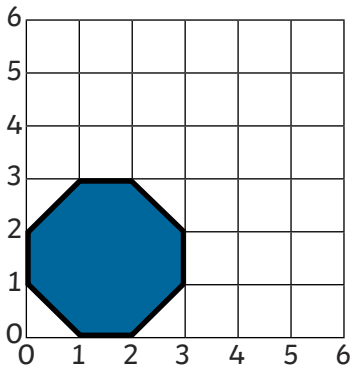
This hexagon is translated **left 4, down 3**.

Draw the hexagon in its new position.



This hexagon is translated **right 3, down 4**.

Draw the hexagon in its new position.

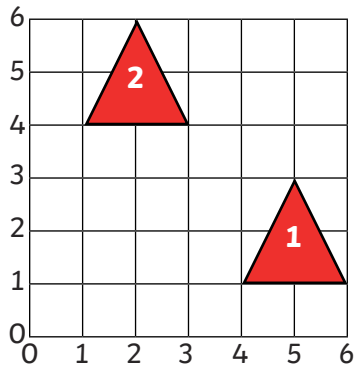


This octagon is translated **right 3, up 2**.

Draw the octagon in its new position.

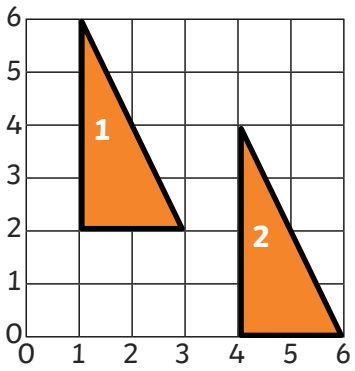
Drawing Translated Shapes Answers

Draw the 2D shapes in their new positions after a translation along both axes.



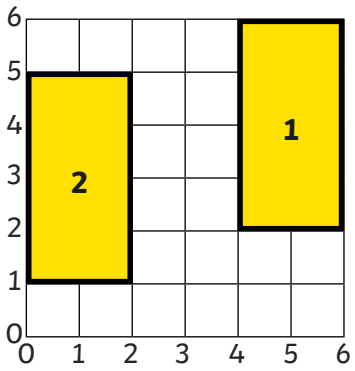
This equilateral triangle is translated **left 3, up 3**.

Draw the triangle in its new position.



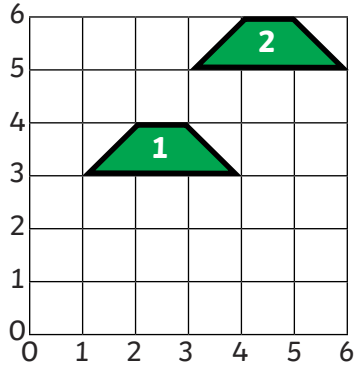
This right-angled triangle is translated **right 3, down 2**.

Draw the triangle in its new position.



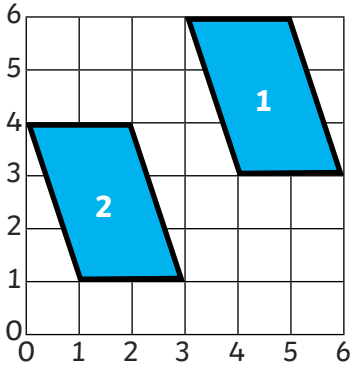
This rectangle is translated **left 4, down 1**.

Draw the rectangle in its new position.



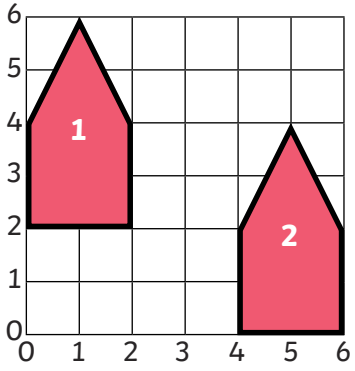
This trapezium is translated **right 2, up 2**.

Draw the trapezium in its new position.



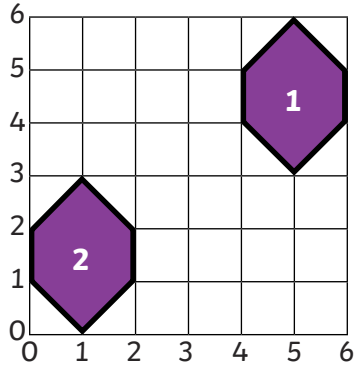
This parallelogram is translated **left 3, down 2**.

Draw the paraellelogram in its new position.



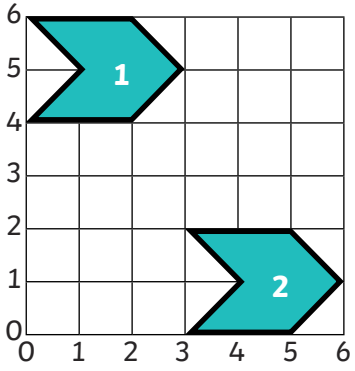
This pentagon is translated **right 4, down 2**.

Draw the pentagon in its new position.



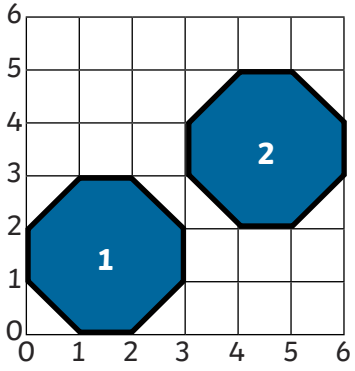
This hexagon is translated **left 4, down 3**.

Draw the hexagon in its new position.



This hexagon is translated **right 3, down 4**.

Draw the hexagon in its new position.

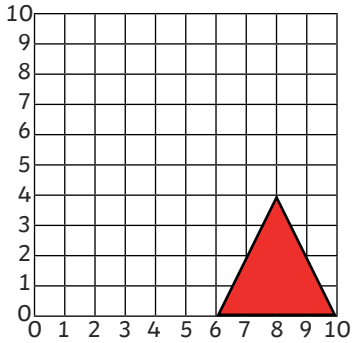


This octagon is translated **right 3, up 2**.

Draw the octagon in its new position.

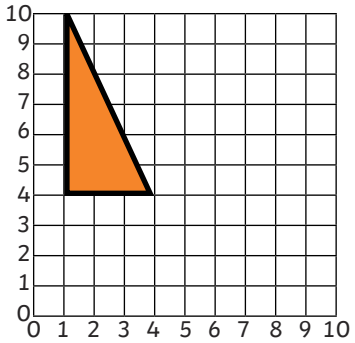
Drawing Translated Shapes

Draw the 2D shapes in their new positions after a translation along both axes.



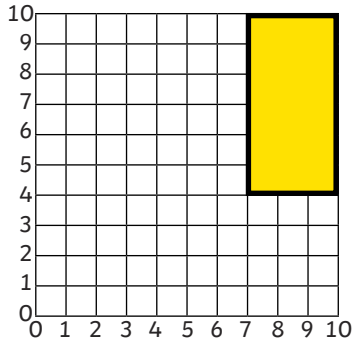
This equilateral triangle is translated **left 5, up 5**.

Draw the triangle in its new position.



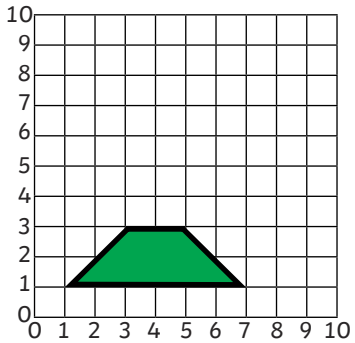
This right-angled triangle is translated **right 6, down 3.**

Draw the triangle in its new position.



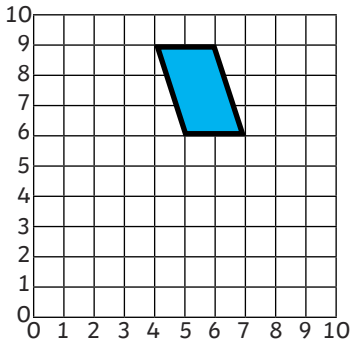
This rectangle is translated **left 5, down 2.**

Draw the rectangle in its new position.



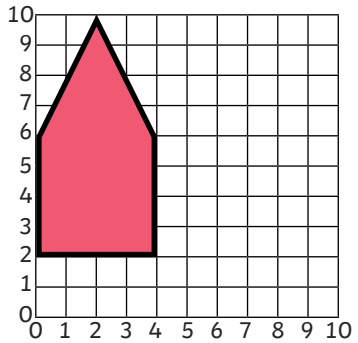
This trapezium is translated **right 2, up 7.**

Draw the trapezium in its new position.



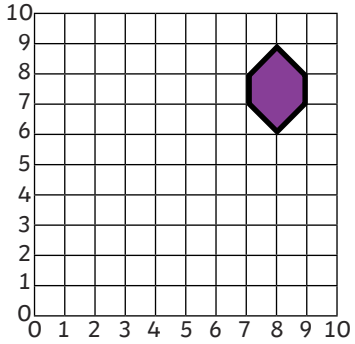
This parallelogram is translated **left 3, down 5.**

Draw the parallelogram in its new position.



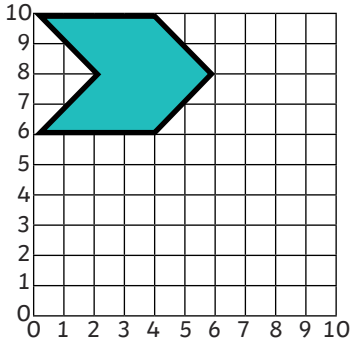
This pentagon is translated **right 6, down 2.**

Draw the pentagon in its new position.



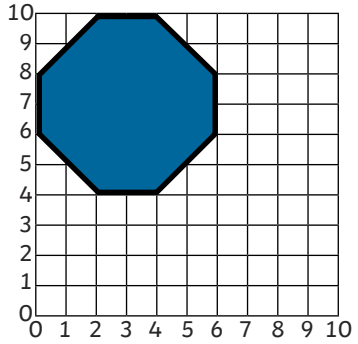
This hexagon is translated **left 5, down 3.**

Draw the pentagon in its new position.



This hexagon is translated **right 3, down 6.**

Draw the hexagon in its new position.

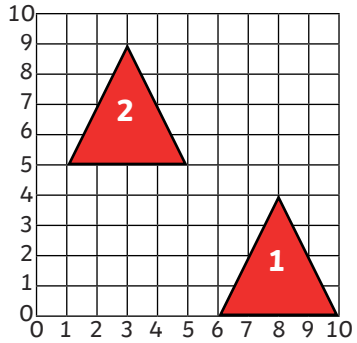


This octagon is translated **right 4, down 4.**

Draw the octagon in its new position.

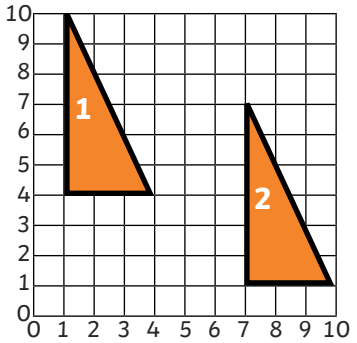
Drawing Translated Shapes Answers

Draw the 2D shapes in their new positions after a translation along both axes.



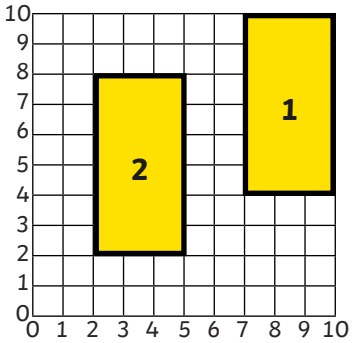
This equilateral triangle is translated **left 5, up 5**.

Draw the triangle in its new position.



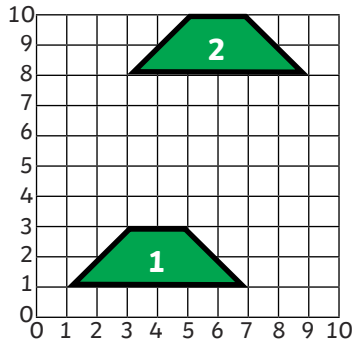
This right-angled triangle is translated **right 6, down 3.**

Draw the triangle in its new position.



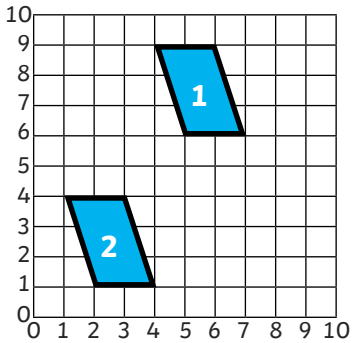
This rectangle is translated **left 5, down 2.**

Draw the rectangle in its new position.



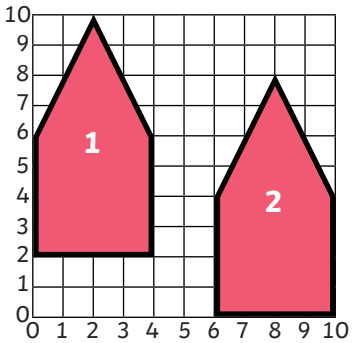
This trapezium is translated **right 2, up 7.**

Draw the trapezium in its new position.



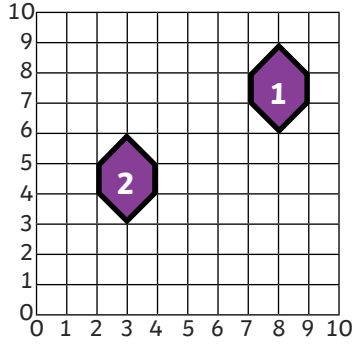
This parallelogram is translated **left 3, down 5.**

Draw the parallelogram in its new position.



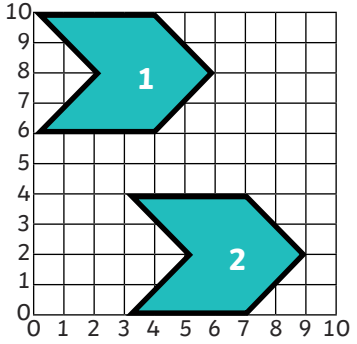
This pentagon is translated **right 6, down 2.**

Draw the pentagon in its new position.



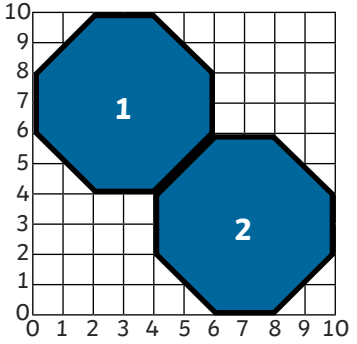
This hexagon is translated **left 5, down 3.**

Draw the pentagon in its new position.



This hexagon is translated **right 3, down 6.**

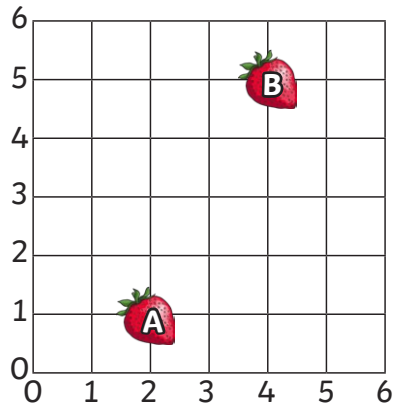
Draw the hexagon in its new position.



This octagon is translated **right 4, down 4.**

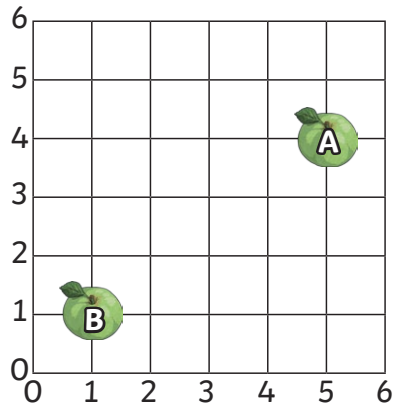
Draw the octagon in its new position.

A to B



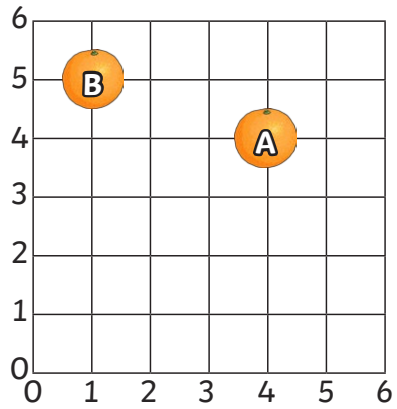
$$\begin{pmatrix} -4 \\ -3 \end{pmatrix}$$

A to B



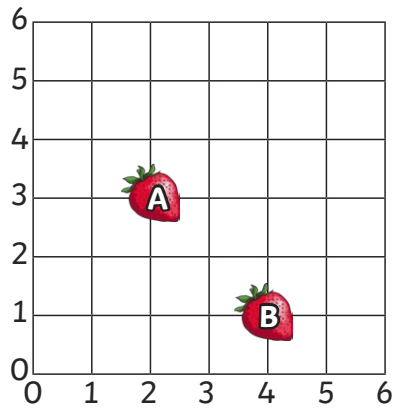
$$\begin{pmatrix} -3 \\ +1 \end{pmatrix}$$

A to B



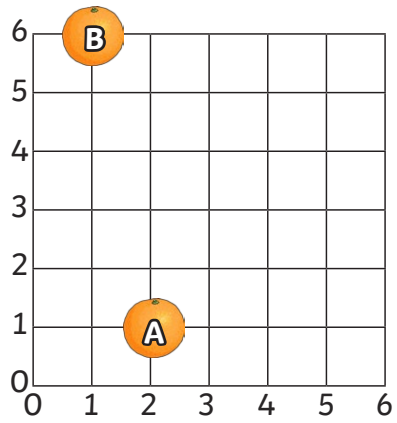
$$\begin{pmatrix} +2 \\ -2 \end{pmatrix}$$

A to B



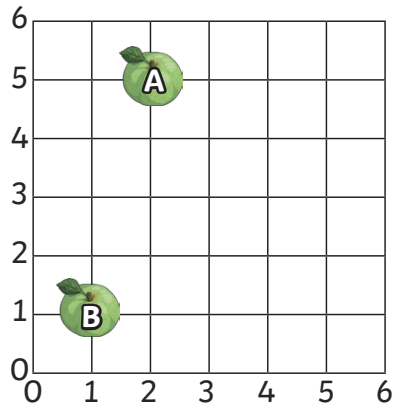
$$\begin{pmatrix} -1 \\ +5 \end{pmatrix}$$

A to B



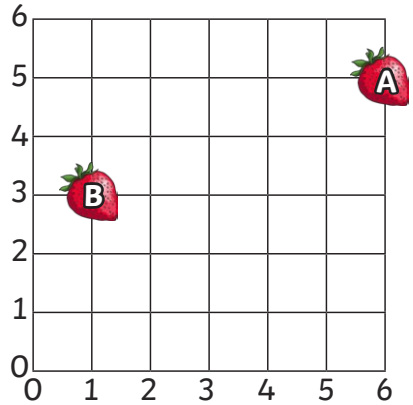
$$\begin{pmatrix} -1 \\ -4 \end{pmatrix}$$

A to B



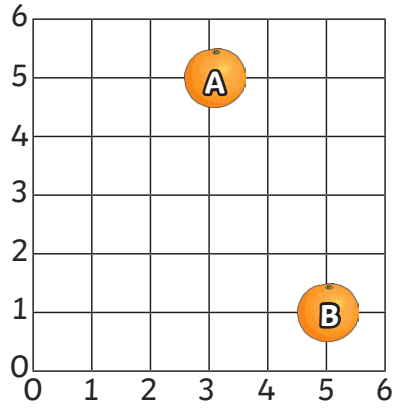
$$\begin{pmatrix} -5 \\ -2 \end{pmatrix}$$

A to B



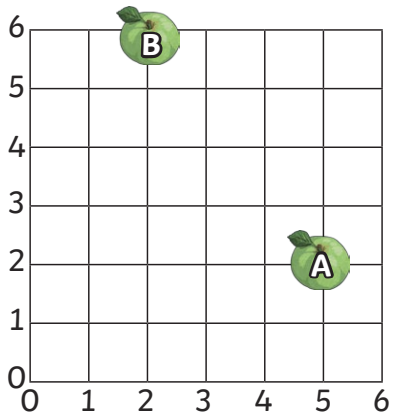
$$\begin{pmatrix} +2 \\ -4 \end{pmatrix}$$

A to B



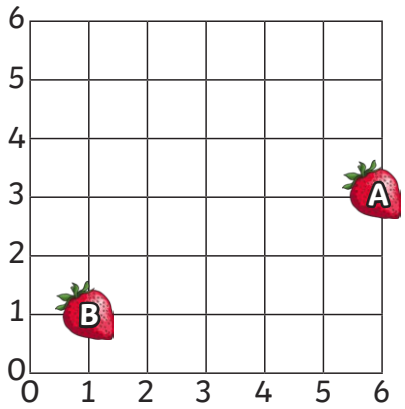
$$\begin{pmatrix} -3 \\ +4 \end{pmatrix}$$

A to B



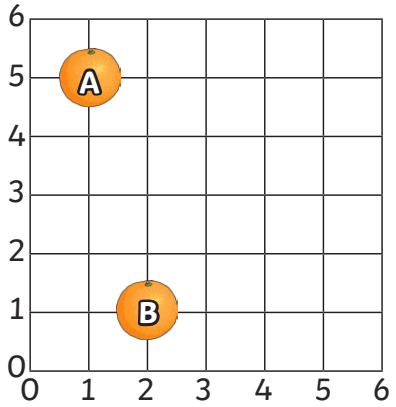
$$\begin{pmatrix} -5 \\ -2 \end{pmatrix}$$

A to B



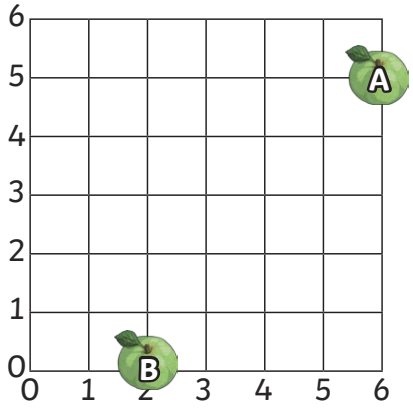
$$\begin{pmatrix} +1 \\ -4 \end{pmatrix}$$

A to B



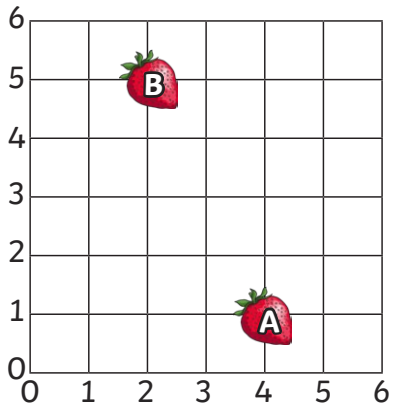
$$\begin{pmatrix} -4 \\ -5 \end{pmatrix}$$

A to B



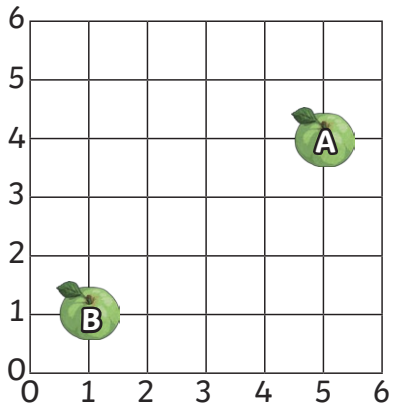
$$\begin{pmatrix} +2 \\ +4 \end{pmatrix}$$

A to B



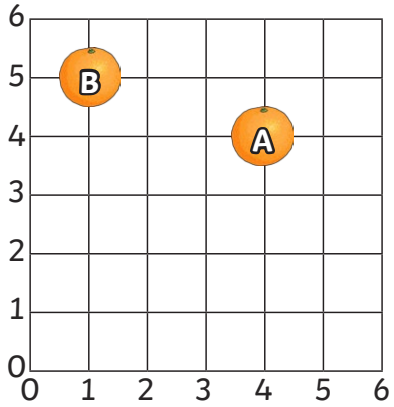
Left 4
Down 3

A to B



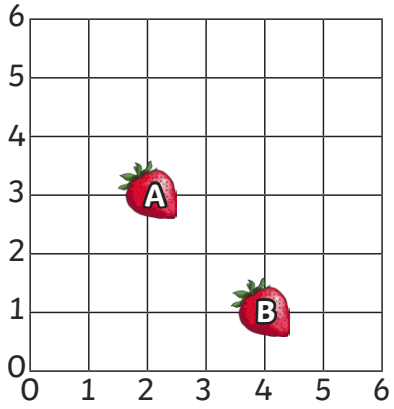
Left 3
Up 1

A to B

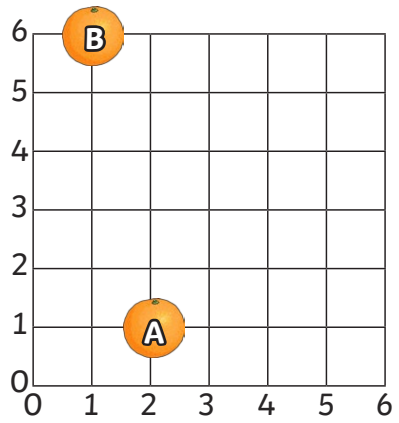


Right 2
Down 2

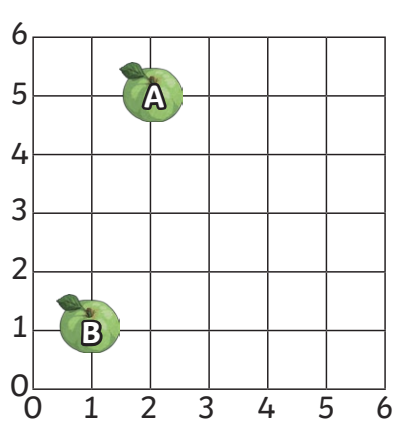
A to B



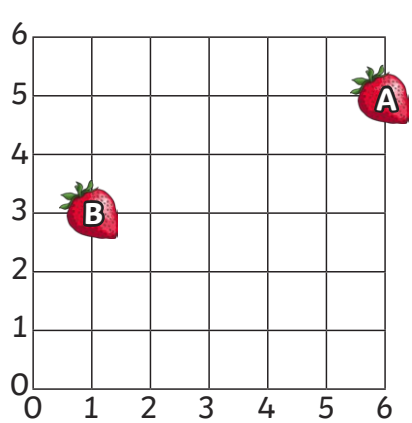
Left 1
Up 5



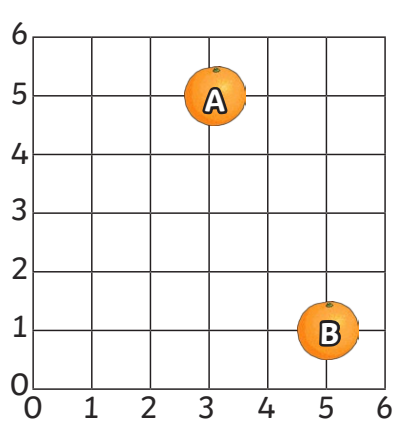
Left 1
Down 4



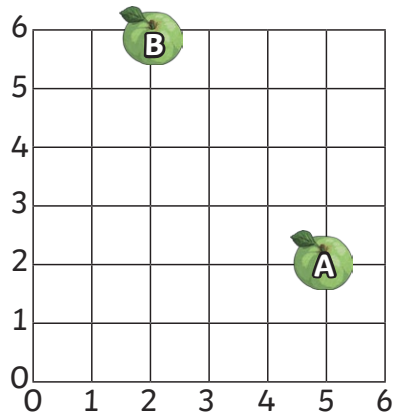
Left 5
Down 2



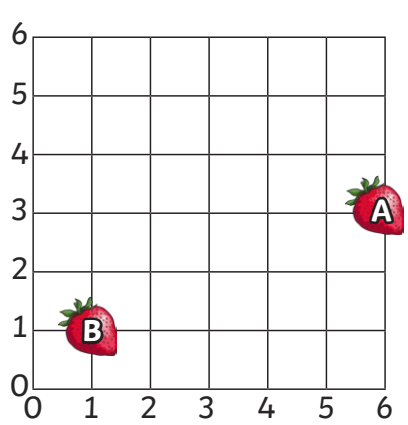
Right 2
Down 4



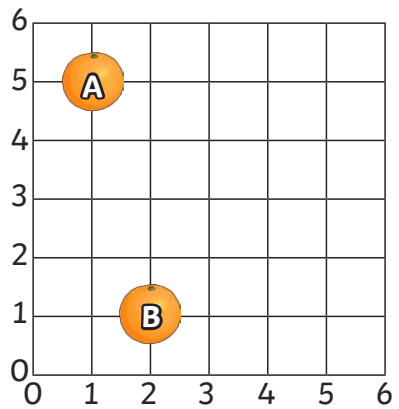
Left 3
Up 4



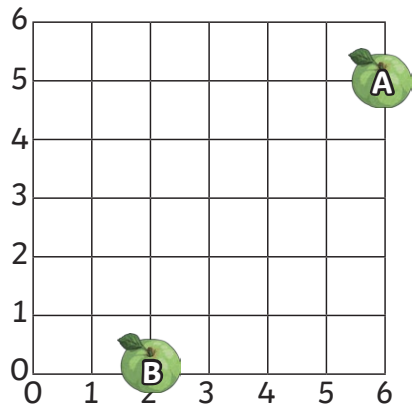
Left 5
Down 2



Right 1
Down 4



Left 4
Down 5



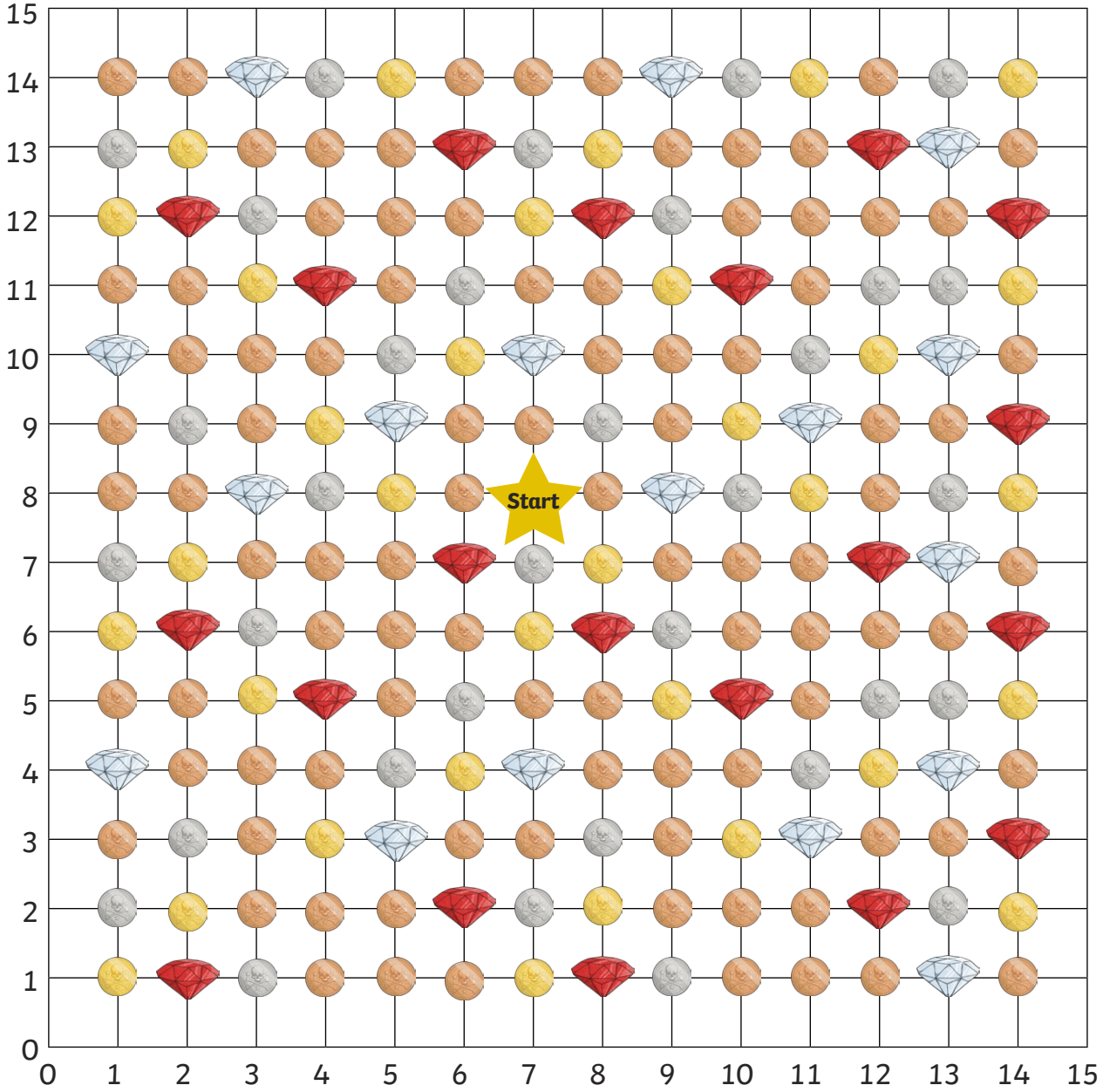
Left 2
Up 4

Translations Treasure Hunt Game

How to Play:

- Take it in turns to roll two dice to make a translation.
- From the start position, slide your finger right or left, up or down according to your translation numbers.
- Win the treasure at that position.
- The winner is the player who collects the most treasure.
- If you roll a translation which isn't possible from your current position, miss a go!

	= 1 point		= 7 points
	= 3 points		= 10 points
	= 5 points		



Avery Template: Name Badge Label, 8 per sheet | **Compatible Products**: 15395, 25395, 42395, 45395, 48395, 5395, 8395, 88395, 85395.

Measurement and Geometry | Drawing Translated Shapes

I can draw the position of a shape following a translation.		
I can read, write and plot coordinates in the first quadrant.		
I know that translation is a movement from one position to another without rotation or resizing.		

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