

# Maths Home Learning

Week Beginning 5.7.2021



## Horton Grange Primary KS2 Timetable 2020-2021: Year 4

	8:45- 8:50	8:50 - 9:50	9:50 - 10:05	10.05 - 10.20	10:20 - 11:20	11:20 - 12:15	12:15 - 1:05	1:05 - 1:10	1:10 - 2:05	2:05 - 3:00
<b>Monday</b>	Registration	<b>EURO 2020 ACTIVITIES - Maths</b>	Break	<b>Newsround</b>	<b>EURO 2020 ACTIVITIES - English</b>	<b>EURO 2020 ACTIVITIES</b>	Lunch Time		<b>Music</b>	<b>Curriculum</b>
<b>Tuesday</b>		<b>Maths</b>		<b>Newsround</b>	<b>English</b>	<b>RE</b>		<b>Handwriting</b>	<b>PE</b>	
<b>Wednesday</b>		<b>Maths</b>		<b>Newsround</b>	<b>English</b>	<b>Xtables</b>		<b>Science</b>		
<b>Thursday</b>		<b>Maths</b>		<b>Newsround</b>	<b>English</b>	<b>Curriculum</b>		<b>Curriculum</b>		
<b>Friday</b>		<b>Maths</b>		<b>Newsround</b>	<b>Guided Reading</b>	<b>Guided Reading</b>		<b>PSHE</b>		

# Monday 5<sup>th</sup> July

## Football-Themed Code Breaker



Solve the calculations and use the code breaker to spell out football-themed words.

A	B	C	D	E	F	G	H	I	J	K	L	M
26	25	24	23	22	21	20	19	18	17	16	15	14

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
13	12	11	10	9	8	7	6	5	4	3	2	1

	Answer	Letter
56 - 33		
86 - 64		
48 - 27		
32 - 10		
59 - 46		
84 - 61		
62 - 40		
36 - 27		

	Answer	Letter
48 - 34		
52 - 26		
49 - 42		
71 - 47		
65 - 46		

	Answer	Letter
89 - 80		
98 - 76		
58 - 37		
65 - 43		
33 - 24		
48 - 26		
75 - 53		

	Answer	Letter
51 - 26		
54 - 28		
65 - 50		
94 - 79		

	Answer	Letter
54 - 38		
65 - 47		
36 - 12		
45 - 29		

	Answer	Letter
75 - 55		
59 - 47		
46 - 20		
85 - 70		
62 - 46		
63 - 41		
72 - 50		
65 - 54		
23 - 1		
75 - 66		

## Football-Themed Code Breaker



Solve the calculations and use the code breaker to spell out football-themed words.

A	B	C	D	E	F	G	H	I	J	K	L	M
6	15	21	5	13	24	18	7	12	1	25	19	9

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
22	16	11	26	2	17	20	3	10	8	14	23	4

	Answer	Letter
36 + 4		
4 x 3		
55 + 11		
4 x 6		
6 x 2		
26 + 2		
38 + 2		
60 + 12		
39 + 3		
10 + 5		

	Answer	Letter
22 + 2		
4 x 3		
4 x 5		
7 x 3		
7 x 1		

	Answer	Letter
5 x 3		
4 x 4		
8 x 2		
5 x 4		
34 + 2		

	Answer	Letter
40 + 5		
14 + 2		
3 x 4		
51 + 3		
10 x 2		
57 + 3		
39 + 3		

	Answer	Letter
34 + 2		
15 + 5		
55 + 5		
110 + 10		
2 x 8		
1 x 2		
80 + 4		
65 + 5		
16 + 8		

	Answer	Letter
10 x 2		
65 + 5		
24 + 4		
63 + 7		

## Football-Themed Code Breaker



Solve the calculations and use the code breaker to spell out football-themed words.

A	B	C	D	E	F	G	H	I	J	K	L	M
3	10	18	16	1	21	9	14	24	6	19	12	4

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
7	13	20	25	5	23	11	26	22	15	2	17	8

$\frac{1}{2}$ of	Answer	Letter
46		
22		
10		
48		
38		
2		
10		

$\frac{1}{3}$ of	Answer	Letter
60		
3		
21		
9		
36		
33		
51		

$\frac{1}{4}$ of	Answer	Letter
92		
56		
52		
20		
44		
92		

$\frac{1}{5}$ of	Answer	Letter
55		
15		
90		
95		
60		
5		

$\frac{1}{8}$ of	Answer	Letter
32		
24		
56		
24		
72		
8		
40		

$\frac{1}{10}$ of	Answer	Letter
200		
120		
30		
170		
10		
50		
230		

Tuesday 6<sup>th</sup> July

6.7.21

Describing  
Coordinates

**8 times table**

$1 \times 8 = 8$

$2 \times 8 = 16$

$3 \times 8 = 24$

$4 \times 8 = 32$

$5 \times 8 = 40$

$6 \times 8 = 48$

$7 \times 8 = 56$

$8 \times 8 = 64$

$9 \times 8 = 72$

$10 \times 8 = 80$

$11 \times 8 = 88$

$12 \times 8 = 96$

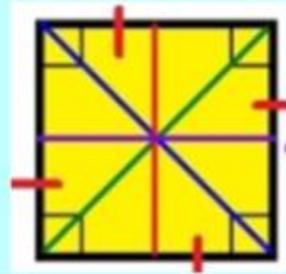
**Timestables.com**

*Tell me the inverse of all of the number sentences within the 8 times tables.*

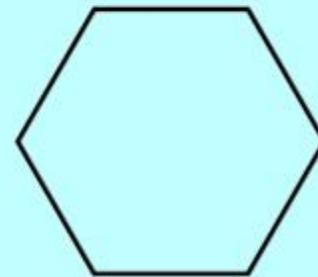
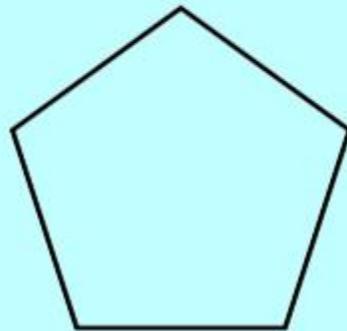
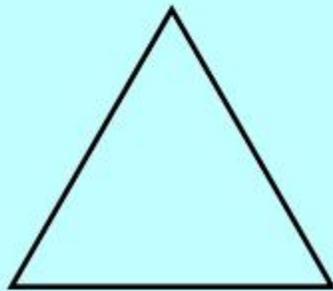
## OMS: Lines of Symmetry

Can you work out how many lines of symmetry are in each shape?

Draw lines to help you.



A square has 4 lines of symmetry

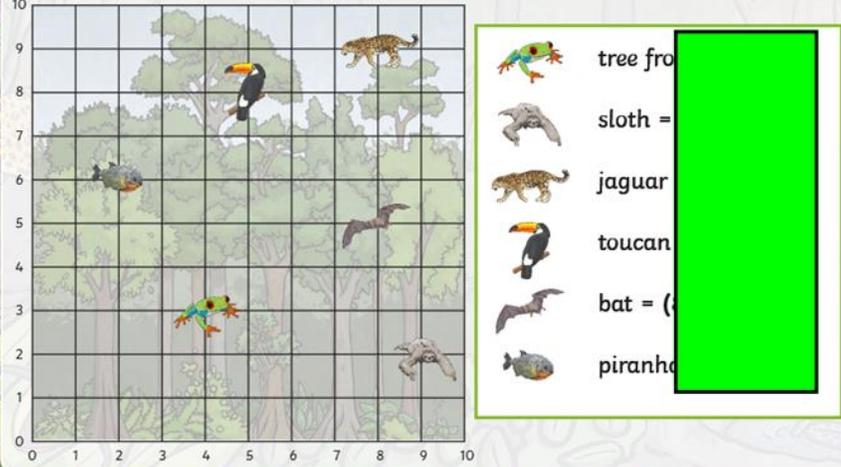


## Using Coordinates

Where have we seen these before?

**Describing Position** **Diving**

This coordinate grid shows the animals in a rainforest.  
Can you give the coordinates of each rainforest creature?



	tree frog = ( , )
	sloth = ( , )
	jaguar = ( , )
	toucan = ( , )
	bat = ( , )
	piranha = ( , )

What are the axis called?

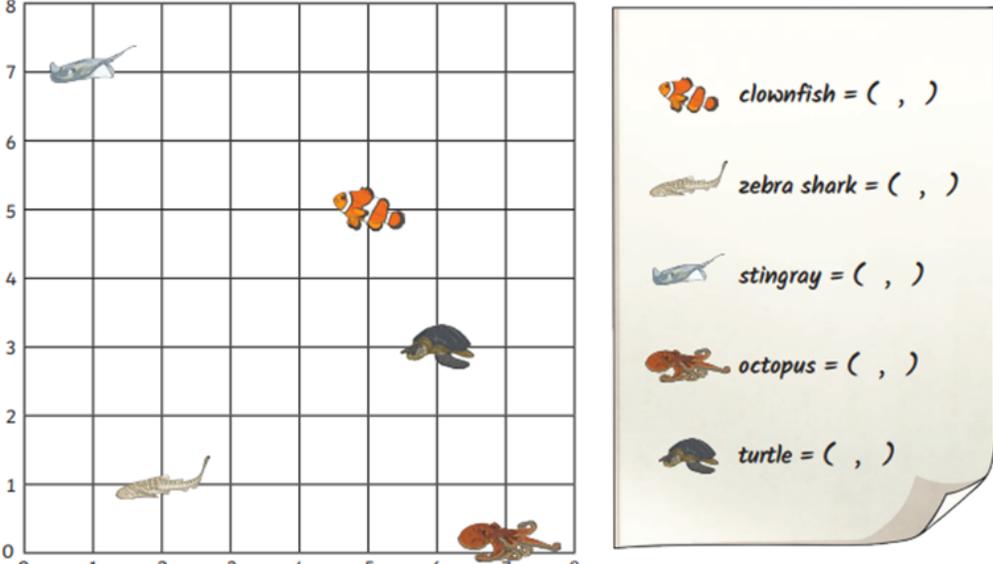
Which do we look at first?

How should we write a coordinate?

## Using Coordinates

**We Do:** Let's help Martin find the sea creatures!

1) Martin has gone scuba diving. He has a list of sea creatures that he really wants to see.  
Can you give him the coordinates to find each of the sea creatures on his list?

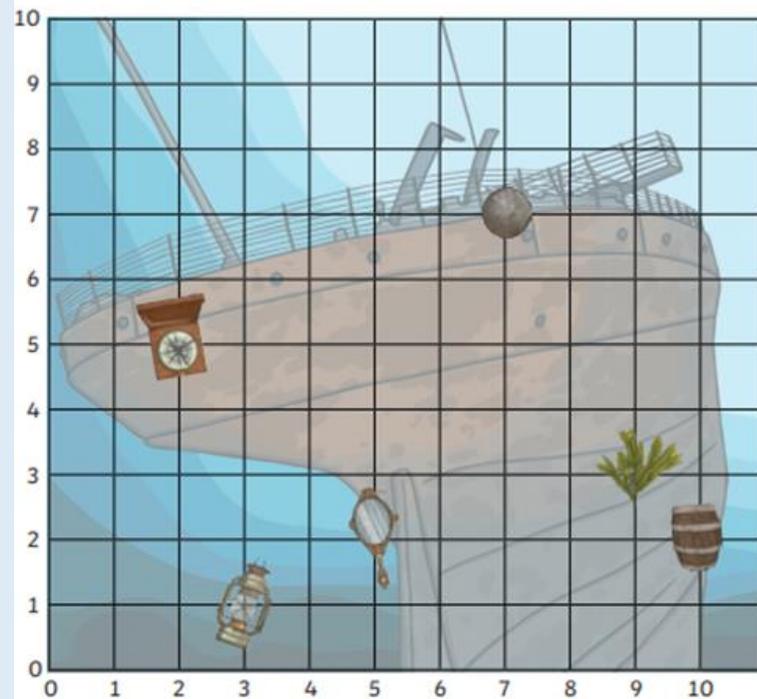


	clownfish = ( , )
	zebra shark = ( , )
	stingray = ( , )
	octopus = ( , )
	turtle = ( , )

## Using Coordinates

**You Do:** What has Sienna found?!  
Let's be super star scuba divers!

- 2) Sienna is studying a shipwreck. She needs to record what item she found at each location on the grid. Help her by drawing or writing the names of the shipwrecked items next to the correct coordinates.



= (3,1)

= (2,5)

= (10,2)

= (9,3)

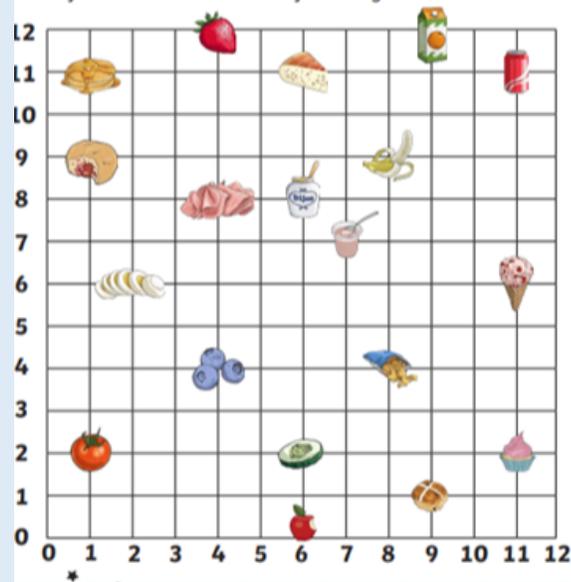
= (7,7)

= (5,2)

# Using Coordinates

In pairs, answer the following questions on your WB's.

What food and drink is at the following coordinates?

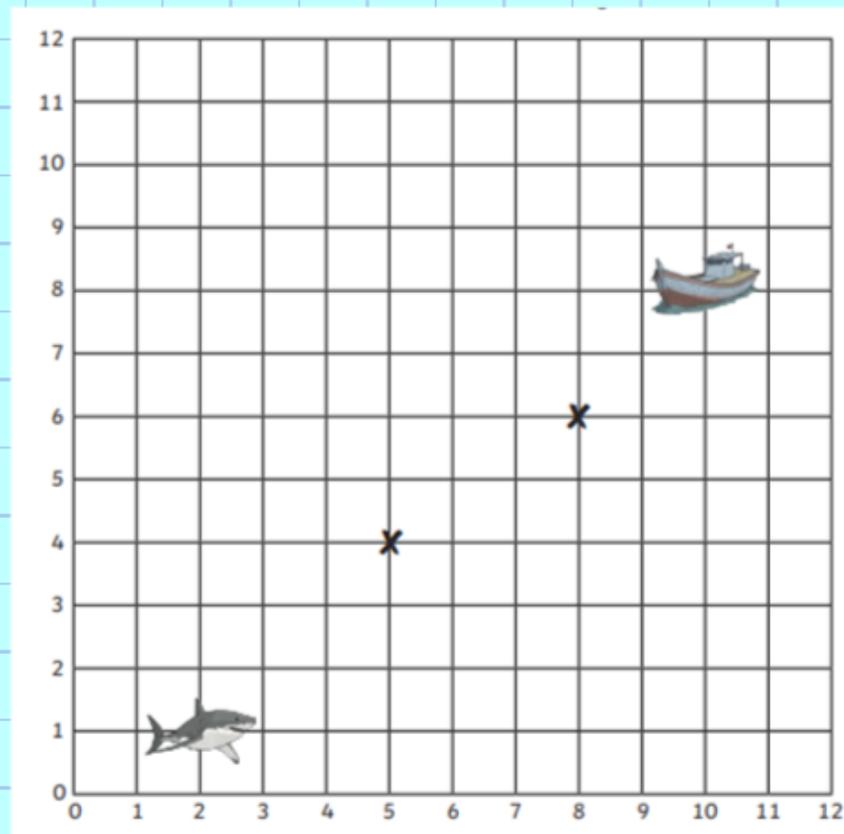


- (6,11) = ----- (7,7) = -----
- (2,6) = ----- (11,6) = -----
- (11,11) = ----- (1,9) = -----
- (9,1) = ----- (8,4) = -----
- (4,8) = ----- (6,2) = -----

pancakes	strawberry	cheese	cola
doughnut	banana	orange juice	ham
mustard	ice cream	eggs	yoghurt
blueberries	tomato	cupcake	cucumber
apple	hot cross bun	crisps	

## FURTHER CHALLENGE

### Moving Shapes.



The shark is swimming towards the boat in a STRAIGHT LINE. Which other coordinates will it pass through?

Complete the independent tasks in your home learning books.

Don't forget to send in examples of your excellent work each Friday to your class teacher:

[4A@hortongrangeacademy.co.uk](mailto:4A@hortongrangeacademy.co.uk)

[4B@hortongrangeacademy.co.uk](mailto:4B@hortongrangeacademy.co.uk)

[4C@hortongrangeacademy.co.uk](mailto:4C@hortongrangeacademy.co.uk)

# Wednesday 7<sup>th</sup> July

7.7.21

## Coordinate Polygons

### 7 times table

$$1 \times 7 = 7$$

$$2 \times 7 = 14$$

$$3 \times 7 = 21$$

$$4 \times 7 = 28$$

$$5 \times 7 = 35$$

$$6 \times 7 = 42$$

$$7 \times 7 = 49$$

$$8 \times 7 = 56$$

$$9 \times 7 = 63$$

$$10 \times 7 = 70$$

$$11 \times 7 = 77$$

$$12 \times 7 = 84$$

Timestables.com

*Sometimes, Always, Never*

The 8 times tables are double the 4's

When you multiply a number by an odd number, the answer is always odd

If you add an odd number to an even number, the answer is always even

# OMS: Roman Numerals

**Roman Numerals**

Here are the main Roman numerals:

1	5	10	50	100	500	1000
I	V	X	L	C	D	M

**Important Facts:**

- Add numerals together to make larger numbers. When adding, the smaller numeral goes on the right.  
VI = 6   XVII = 17  
CXVI = 116
- You can repeat a numeral up to 3 times to add them together.  
III = 3   XXX = 30   CCC = 300  
Only repeat I, X, C and M.  
V, L and D are not repeated.
- When creating a number with subtraction, you can only subtract one numeral. When subtracting, the smaller numeral goes on the left.  
IV = 5 - 1 = 4   IX = 10 - 1 = 9

1	I	11	XI	30	XXX	400	C
2	II	12	XII	40	XL	200	CC
3	III	13	XIII	50	L	300	CCC
4	IV	14	XIV	60	LX	400	CD
5	V	15	XV	70	LXX	500	D
6	VI	16	XVI	80	LXXX	600	DC
7	VII	17	XVII	90	XC	700	DCC
8	VIII	18	XVIII			800	DCCC
9	IX	19	XIX			900	CM
10	X	20	XX			1,000	M

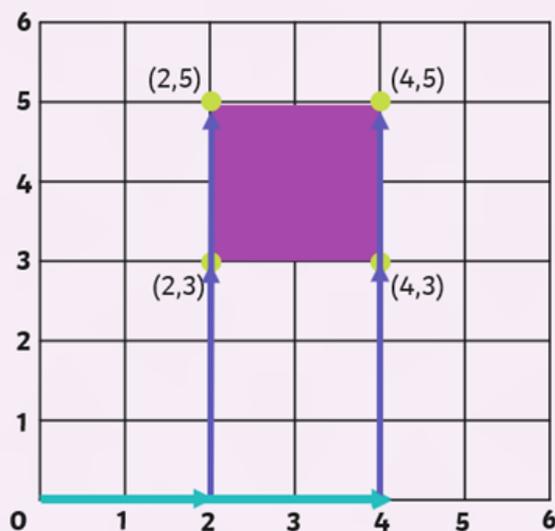
CREATE:

56, II, 22, 123, 78, 45, 981, 2010, 3000, 456

## Using Coordinates

What did we look at yesterday?

### Reading Coordinates



Coordinates are a useful way to locate a position on a grid.

We can give the position of the four corners of this square using this coordinate grid.

We read and write coordinates by reading the number on the **x-axis** then the number on the **y-axis**.

What are the axis called?

Which do we look at first?

How should we write a coordinate?

# Polygons

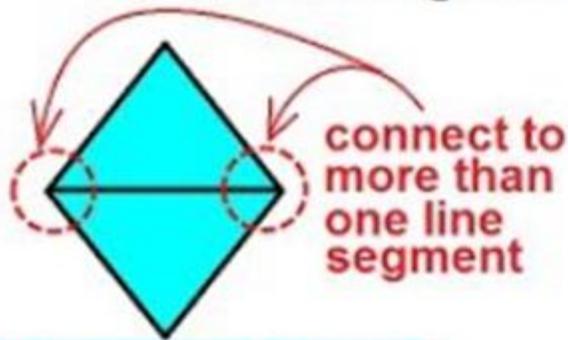
What is a polygon?

## What is a Polygon?

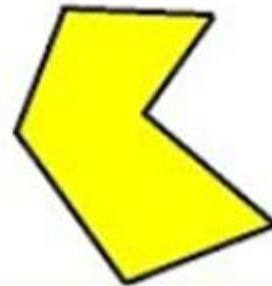
poly- → many    -gon → angles (corners)

Polygon is a figure with the following properties:

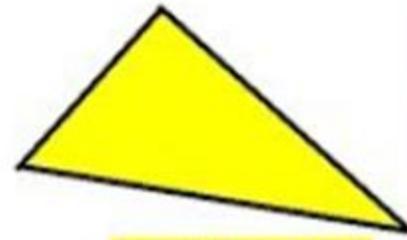
1. It is made with 3 or more line segments (sides)
2. Each line segment end connects to only one other line segment.



not a polygon



polygon

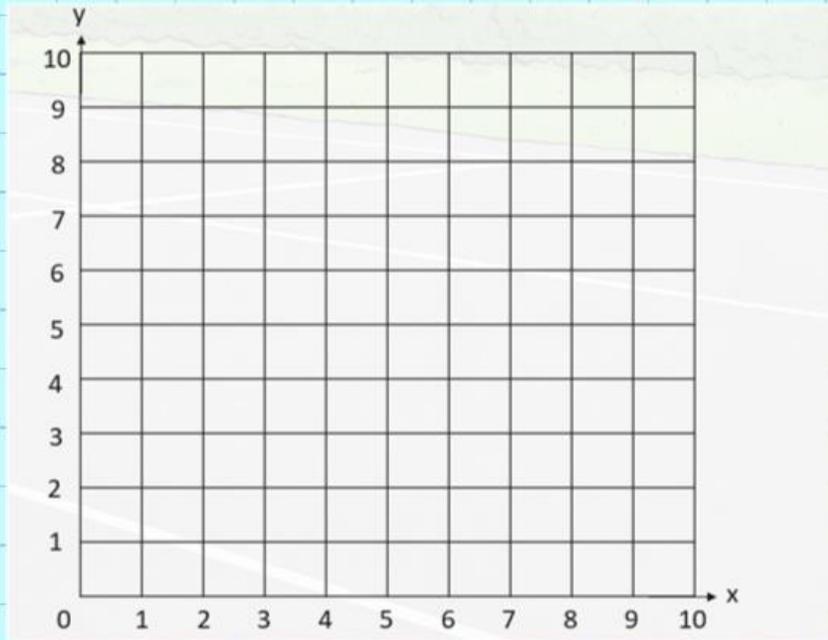


polygon

## Plotting Coordinates

We read the coordinates of items or places on a grid, we can also draw shapes using coordinates.

This is called 'plotting'!



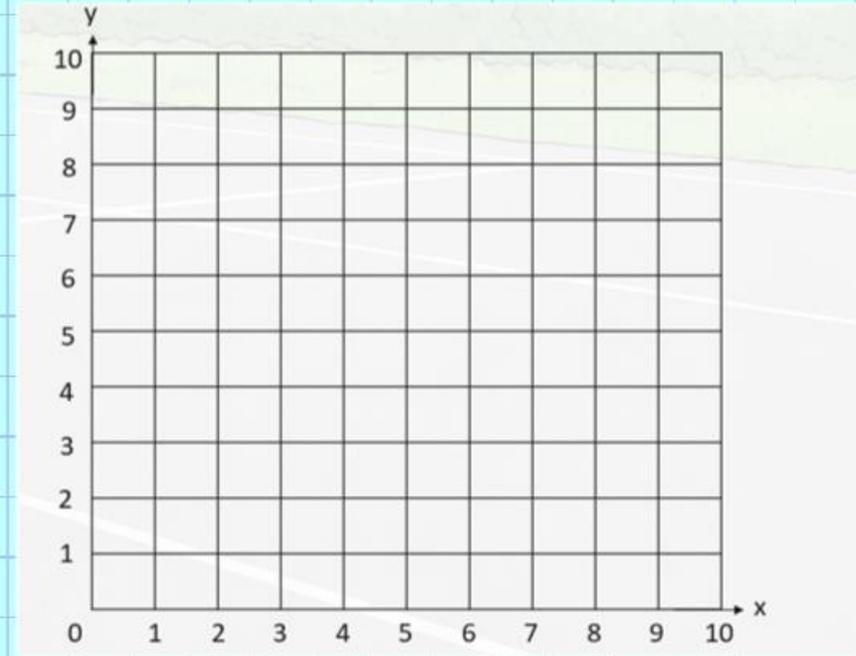
I will plot the following points, remember that I must go along the corridor and up the stairs!

(2, 3), (2, 6), (5, 6), (5, 3)

What is it???

## Plotting Coordinates

We must start with the X axis and move along the corridor and up the stairs to the Y axis.



Let's plot these together:

(4, 3), (8, 3), (6, 6)

What kind of polygon is this?

Complete the independent tasks in your home learning books.

Don't forget to send in examples of your excellent work each Friday to your class teacher:

[4A@hortongrangeacademy.co.uk](mailto:4A@hortongrangeacademy.co.uk)

[4B@hortongrangeacademy.co.uk](mailto:4B@hortongrangeacademy.co.uk)

[4C@hortongrangeacademy.co.uk](mailto:4C@hortongrangeacademy.co.uk)

## Plotting Coordinates

Now it is your turn! Work through the work sheets creating the polygons!

REMEMEBER that the first coordinate is always along the X axis!

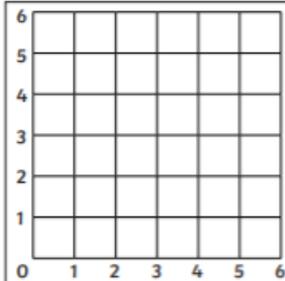
# Storms



## Coordinate Polygons

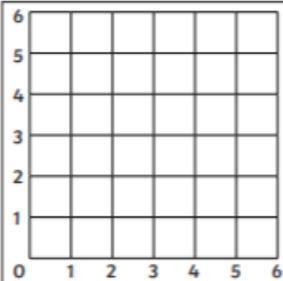
I can plot coordinates to draw polygons.

Plot the given coordinates on the grid and join them up to identify the polygon.



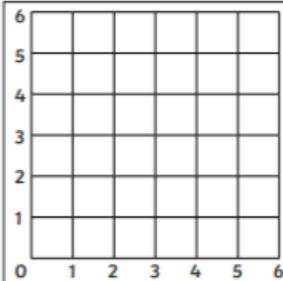
1. (1,1) (5,1) (5,5) (1,5)

Polygon =



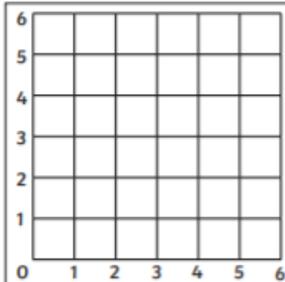
2. (1,3) (5,3) (5,5) (1,5)

Polygon =



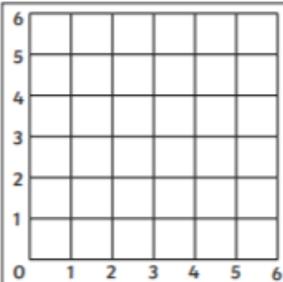
3. (0,3) (3,6) (6,3) (3,0)

Polygon =



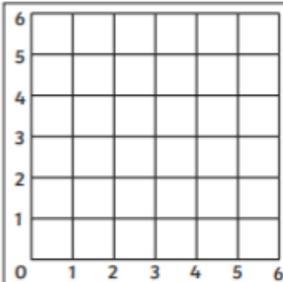
4. (2,6) (4,6) (4,0) (2,0)

Polygon =



5. (1,1) (6,5) (6,1)

Polygon =



6. (1,4) (3,5) (5,4) (4,2) (2,2)

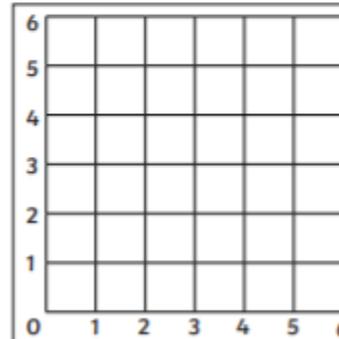
Polygon =



## Coordinate Polygons

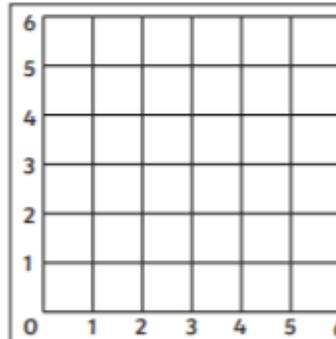
I can plot coordinates to draw polygons.

Plot the given coordinates on the grid and join them up to identify the polygon.



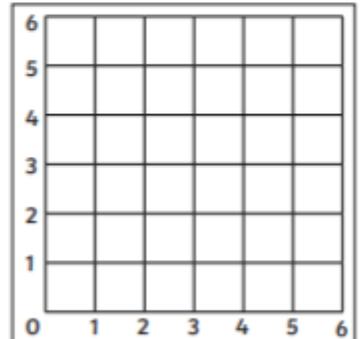
7. (3,5) (5,3) (5,1) (1,1) (1,3)

Polygon =



8. (2,5) (4,5) (5,3) (4,1) (2,1) (1,3)

Polygon =



9. (1,5) (2,3) (1,1) (5,1) (4,3) (5,5)

Polygon =

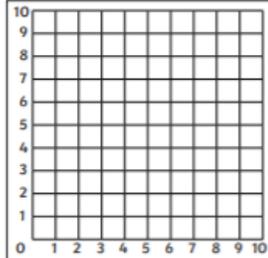
# Black P



## Coordinate Polygons

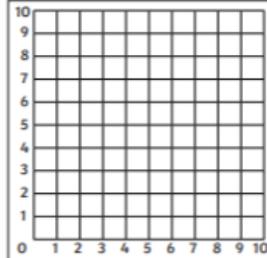
I can plot coordinates to draw polygons.

Plot the given coordinates on the grid and join them up to identify the polygon.



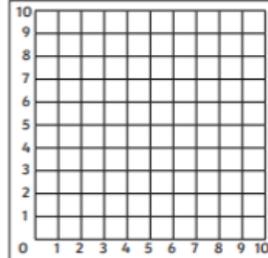
1. (0,3) (3,6) (6,3) (3,0)

Polygon =



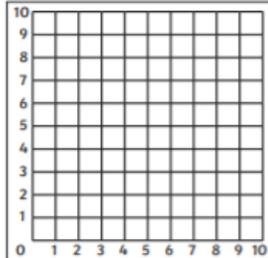
2. (3,2) (5,9) (7,2)

Polygon =



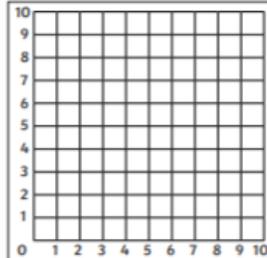
3. (0,3) (4,6) (10,0)

Polygon =



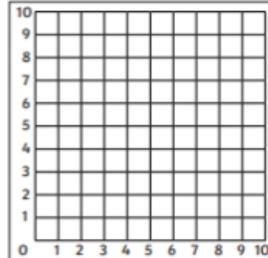
4. (1,9) (7,9) (9,1) (3,1)

Polygon =



5. (8,8) (8,2) (4,4) (4,6)

Polygon =



6. (5,10) (8,7) (5,0) (2,7)

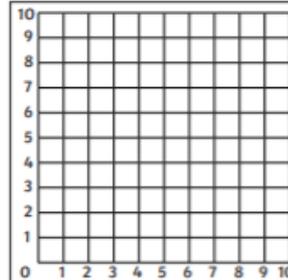
Polygon =



## Coordinate Polygons

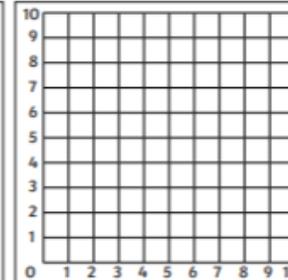
I can plot coordinates to draw polygons.

Plot the given coordinates on the grid and join them up to identify the polygon.



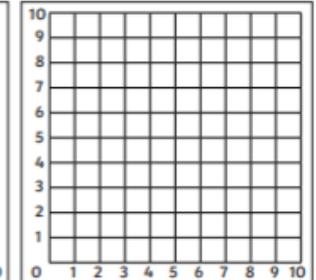
7. (1,9) (1,1) (5,1)  
(10,5) (5,9)

Polygon =



8. (2,9) (5,7) (8,9)  
(8,2) (5,0) (2,2)

Polygon =



9. (1,7) (4,10) (7,10) (10,7)  
(10,4) (7,1) (4,1) (1,4)

Polygon =

# Hulks

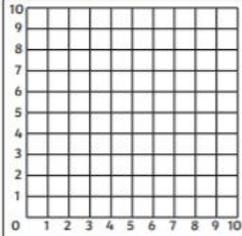
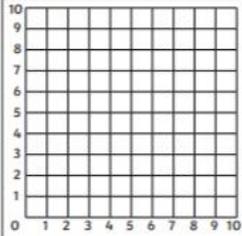
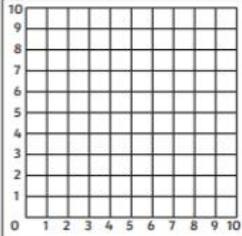
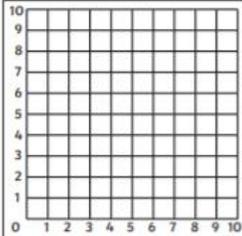
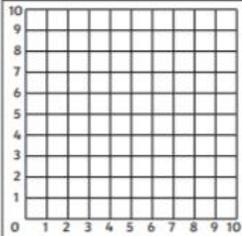
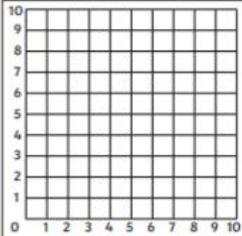


## Coordinate Polygons

I can plot coordinates to draw polygons.

Plot the given coordinates on the grid and join them up to identify the polygon.

**Extra Challenge:** Use a ruler to measure the sides of each polygon to the nearest half cm and calculate the perimeter of each polygon.

 <p>1. (1,1) (8,8) (8,1)</p> <p>Polygon =</p> <p>Perimeter =</p>	 <p>2. (3,2) (5,9) (7,2)</p> <p>Polygon =</p> <p>Perimeter =</p>	 <p>3. (0,3) (4,6) (10,0)</p> <p>Polygon =</p> <p>Perimeter =</p>
 <p>4. (1,9) (7,9) (9,1) (3,1)</p> <p>Polygon =</p> <p>Perimeter =</p>	 <p>5. (8,8) (8,2) (4,3) (4,6)</p> <p>Polygon =</p> <p>Perimeter =</p>	 <p>6. (5,10) (8,7) (5,0) (2,7)</p> <p>Polygon =</p> <p>Perimeter =</p>

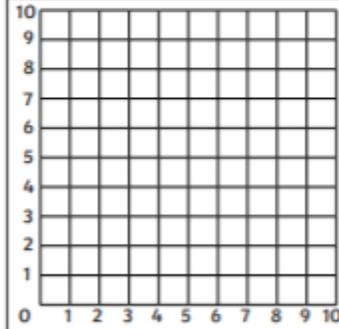
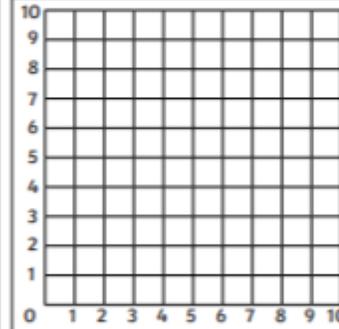
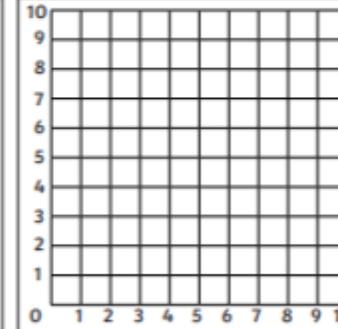


## Coordinate Polygons

I can plot coordinates to draw polygons.

Plot the given coordinates on the grid and join them up to identify the polygon.

**Extra Challenge:** Use a ruler to measure the sides of each polygon to the nearest half cm and calculate the perimeter of each polygon.

 <p>7. (1,9) (1,1) (5,1) (10,5) (5,9)</p> <p>Polygon =</p> <p>Perimeter =</p>	 <p>8. (2,9) (5,7) (8,9) (8,2) (5,0) (2,2)</p> <p>Polygon =</p> <p>Perimeter =</p>	 <p>9. (1,7) (4,10) (7,10) (10,7) (10,4) (7,1) (4,1) (1,4)</p> <p>Polygon =</p> <p>Perimeter =</p>
---	--	--

Thursday 8<sup>th</sup> July

8.7.21

Coordinate Polygons



TRUE or FALSE

$$56 < 123$$

$$8 \times 8 = 87 - 12$$

$$88 \text{ divided by } 11 = 1 \times 8$$

## OMS: Roman Numerals

### Roman Numerals

Here are the main Roman numerals:

1	5	10	50	100	500	1000
I	V	X	L	C	D	M

**Important Facts:**

- Add numerals together to make larger numbers. When adding, the smaller numeral goes on the right.  
VI = 6   XVI = 16  
CXVI = 116
- You can repeat a numeral up to 3 times to add them together.  
III = 3   XXX = 30   CCC = 300  
Only repeat I, X, C and M.  
V, L and D are not repeated.
- When creating a number with subtraction, you can only subtract one numeral. When subtracting, the smaller numeral goes on the left.  
IV = 5 - 1 = 4   IX = 10 - 1 = 9

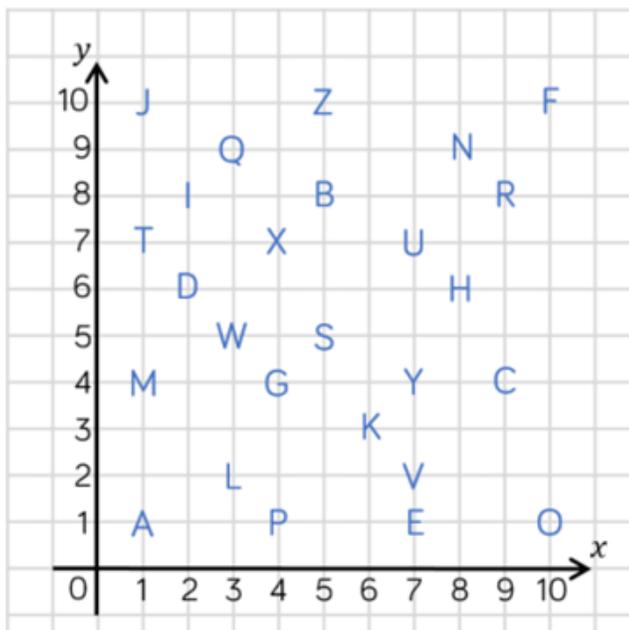
1	I	11	XI	30	XXX	100	C
2	II	12	XII	40	XL	200	CC
3	III	13	XIII	50	L	300	CCC
4	IV	14	XIV	60	LX	400	CD
5	V	15	XV	70	LXX	500	D
6	VI	16	XVI	80	LXXX	600	DC
7	VII	17	XVII	90	XC	700	DCC
8	VIII	18	XVIII			800	DCCC
9	IX	19	XIX			900	CM
10	X	20	XX			1,000	M

CREATE:

IV, XCV, LVI, CML, XI, XXXII, DXII

## Coordinates Re-cap!

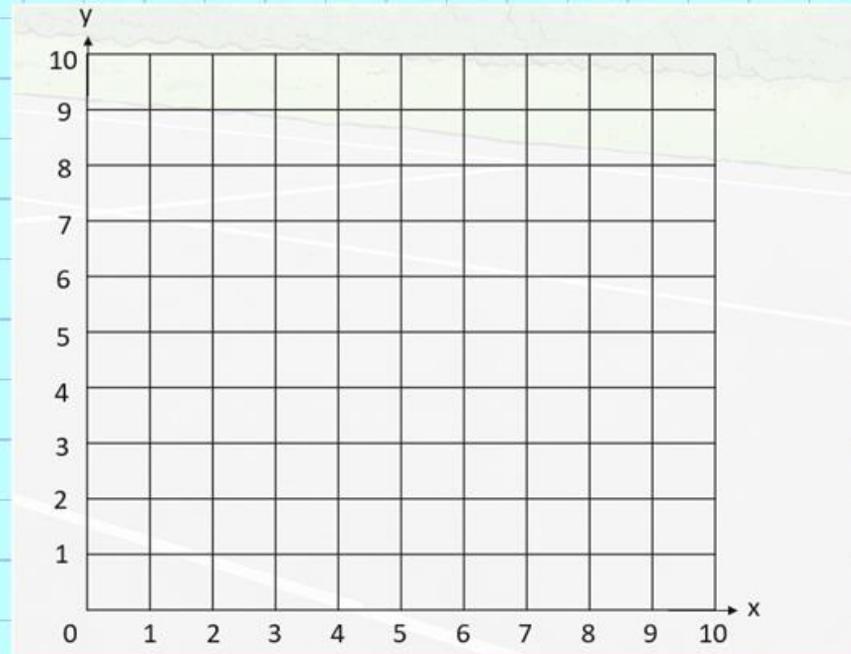
Write out the coordinates that spell your name.



If your name began with a B,  
your coordinate would be (5, 8)

## Plotting Coordinates

Let's plot together!



I will plot the following points,  
remember that I must go along the  
corridor and up the stairs!

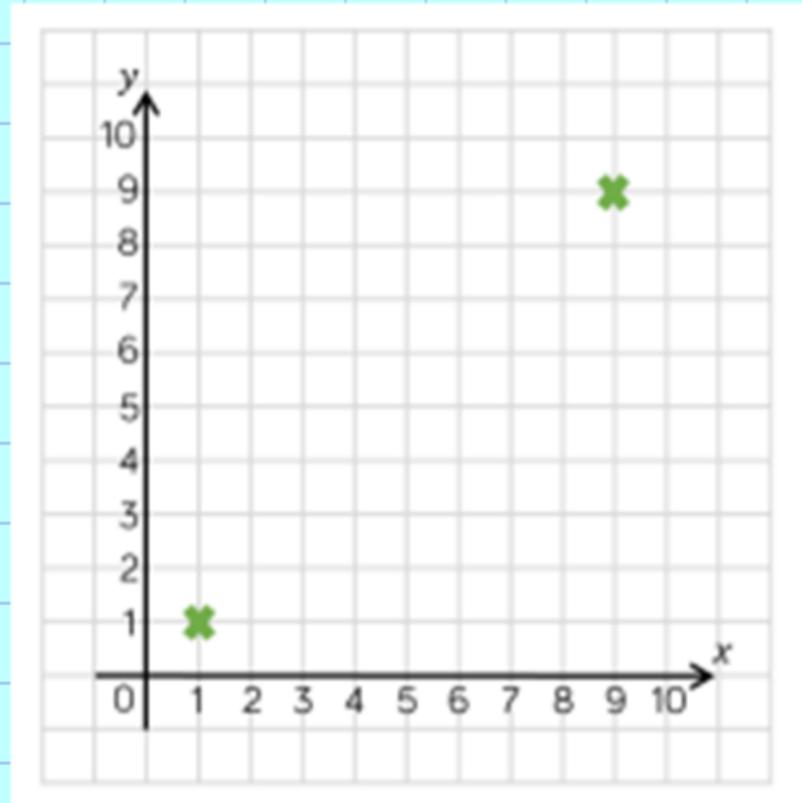
$(2, 2)$ ,  $(4, 2)$ ,  $(4, 4)$ ,  $(5, 6)$

Is this a polygon?

Why?

## Plotting Coordinates

Let's plot together, help me create a polygon!

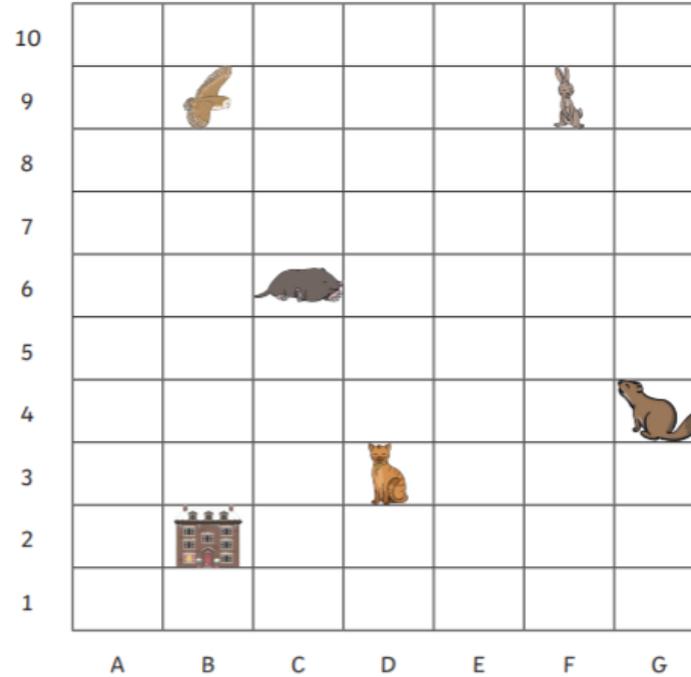


Plot two more points to create a square.

# STORMS

## Ten Little Lights Grid References

Find the objects and animals on the grid. Then, write down their grid references.



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

BP's



## Coordinate Pictures

For each line, start at the first coordinate, plot the next coordinate and join it with a straight line. Keep adding straight lines to the next coordinate until you have finished the coordinates for that line. Complete all of the lines to make the picture.

Line 1: (12,13), (18,20)

Line 2: (10,16), (11,12), (16,12), (12,9), (14,4), (10,7), (6,4), (8,9), (4,12), (9,12), (10,16)

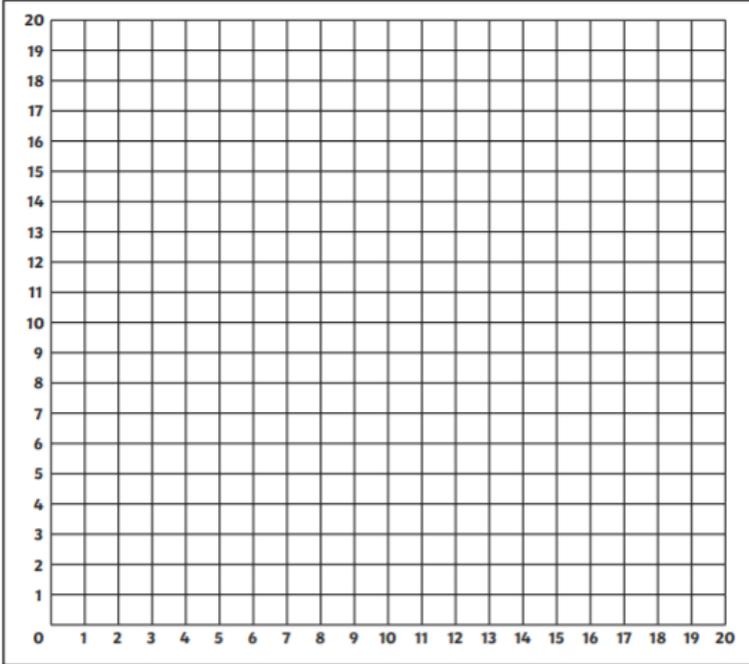
Line 3: (14,8), (20,7)

Line 4: (8,13), (2,20)

Line 5: (10,0), (10,5)

Line 6: (10,20), (12,13), (20,13), (14,8), (17,0), (10,5), (3,0), (6,8), (0,13), (8,13), (10,20)

Line 7: (6,8), (0,7)



# HULKS



## Coordinate Pictures

For each line, start at the first coordinate, plot the next coordinate and join it with a straight line. Keep adding straight lines to the next coordinate until you have finished the coordinates for that line. Complete all of the lines to make the picture.

Line 1: (15,10), (15,14), (16,15), (16,10)

Line 2: (7,12), (9,14)

Line 3: (4,7), (3,6), (3,5), (4,4), (5,4), (6,5), (6,6), (5,7), (4,7)

Line 4: (15,4), (15,3), (16,2), (17,2), (18,3), (18,4), (17,5), (16,5), (15,4),

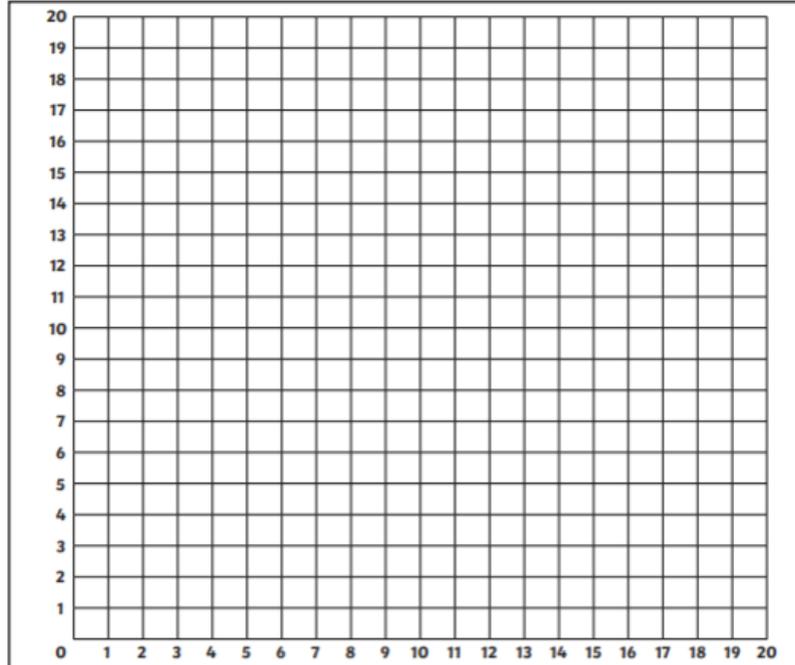
Line 5: (8,4), (8,7), (6,9), (3,9), (1,7), (1,4), (3,2), (6,2), (8,4)

Line 6: (11,10), (8,13)

Line 7: (1,17), (12,17), (10,18), (1,18), (1,10), (0,9), (0,8), (2,10), (7,10), (9,8), (9,6), (12,6),  
(13,10), (10,17)

Line 8: (18,4), (20,5), (20,10), (16,10), (16,8), (17,8), (17,7), (15,7), (15,10), (7,10), (6,11), (3,11),  
(3,15), (2,15), (2,8)

Line 9: (8,4) (15,4)

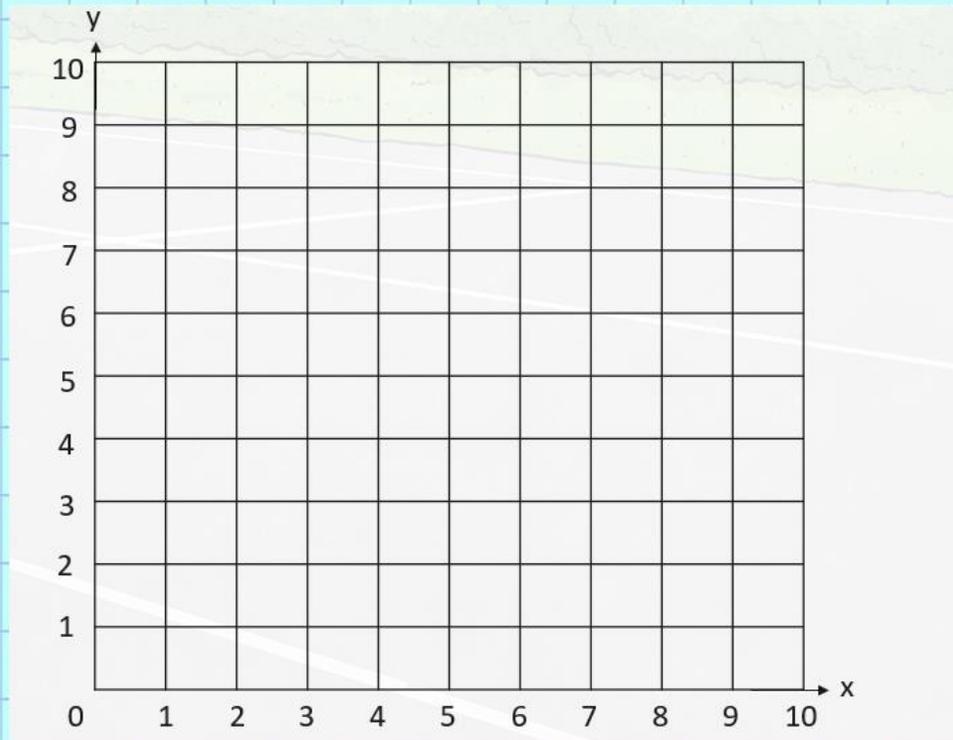


# FURTHER CHALLENGE

## FURTHER CHALLENGE

*If all of my coordinates are even,  
my shape will be a polygon.*

**PROVE IT!**



# Friday 9<sup>th</sup> July

9.7.21

Translations



TRUE *or* FALSE

Create three True or False questions for your partner.

Test them!

## OMS: Counting up and down in hundredths

A hundredth is smaller than a whole and a tenth. Hundredths sit to the right of the decimal point.

3.45 → HUNDREDTH

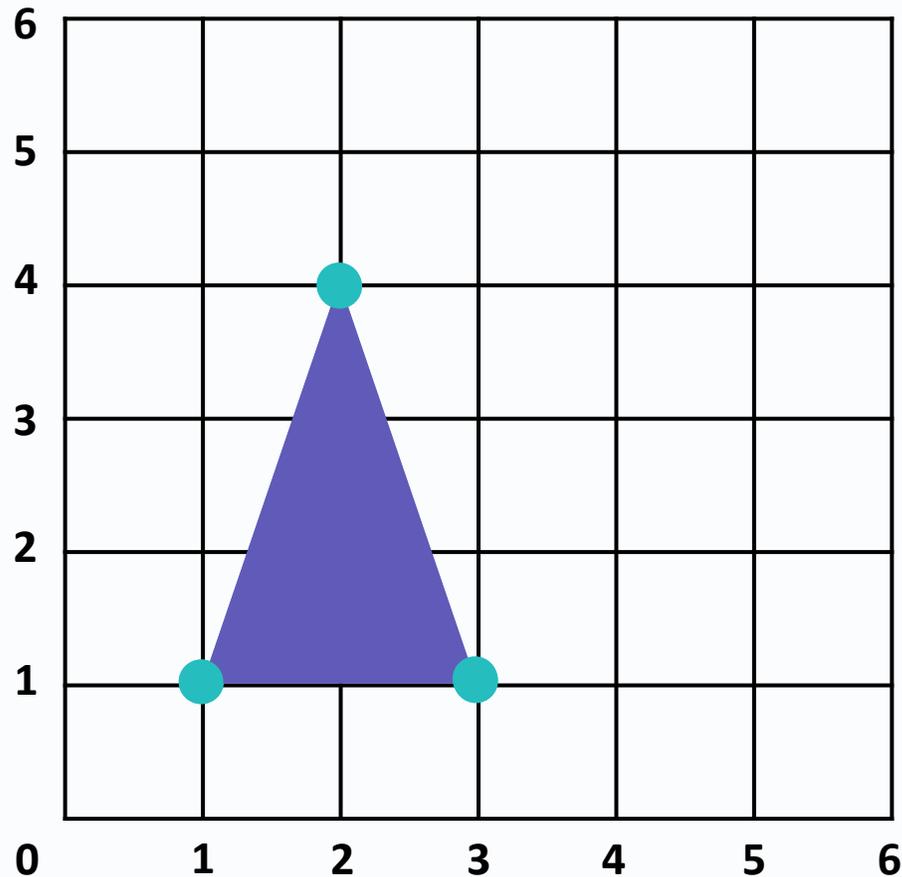
	shaded	tenths	hundredths
	1 row	$\frac{1}{10}$	$\frac{10}{100}$
	2 rows		
	3 rows		
	4 rows		
	5 rows		
	6 rows		

## Translations

Today we will look at translations! This means that we will use coordinates to help us to move 2D shapes around, and describe their new points on the grid!

Let's click here for some explainer's!

# Translating Coordinates



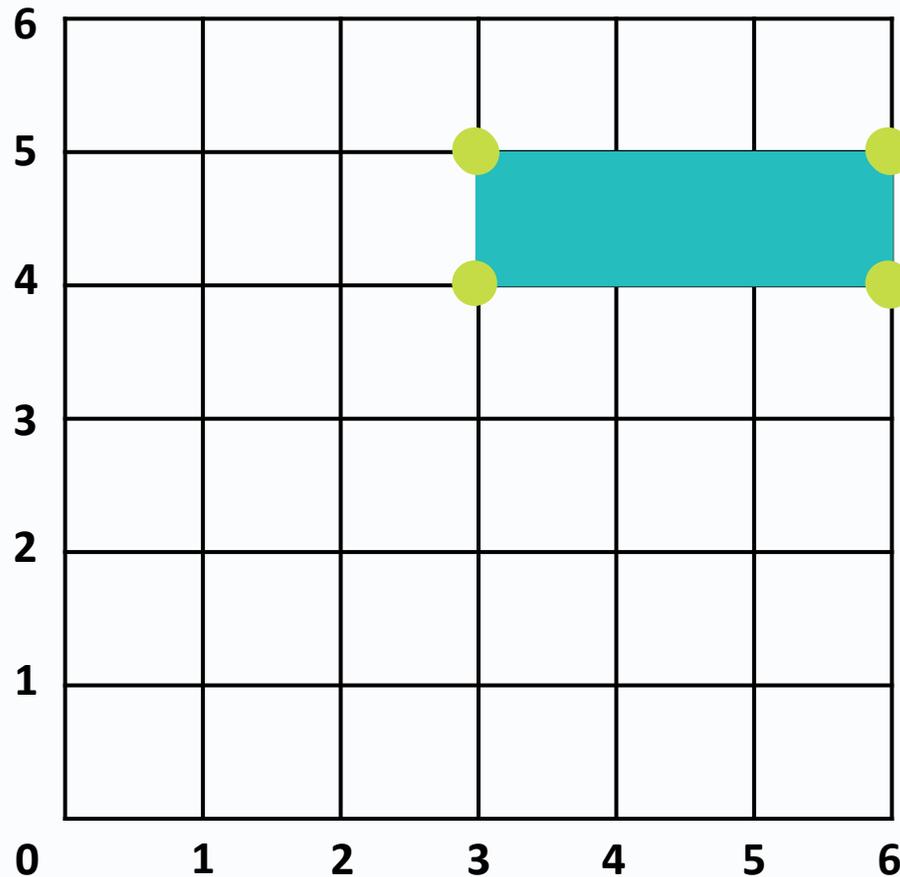
In maths, translation means moving an object on a grid.

The object is moved without changing the size, turning or reflecting it.

When translating a **2D shape** on a grid we have to make sure that **each corner** of the shape is moved the **same direction** and the **same number**.

Click on the purple triangle to translate it **right 3, up 2** on the grid.

# Translating Coordinates



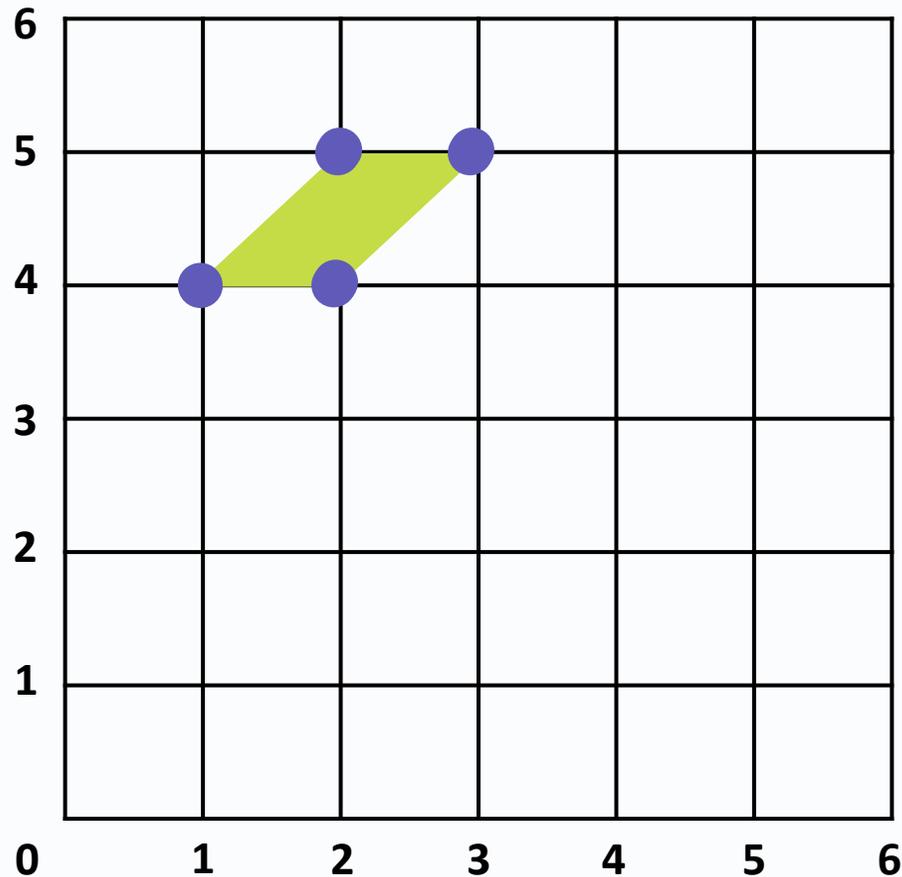
In maths, translation means moving an object on a grid.

The object is moved without changing the size, turning or reflecting it.

When translating a **2D shape** on a grid we have to make sure that **each corner** of the shape is moved the **same direction** and the **same number**.

Click on the blue rectangle to translate it **left 2, down 4** on the grid.

# Translating Coordinates



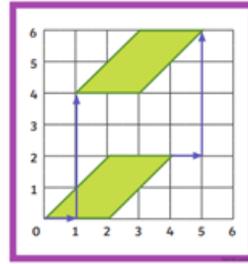
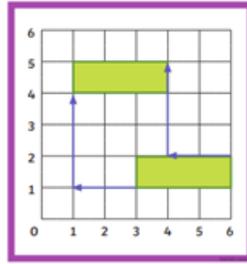
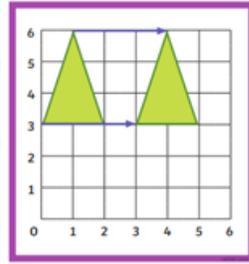
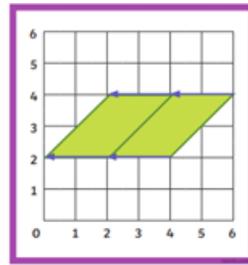
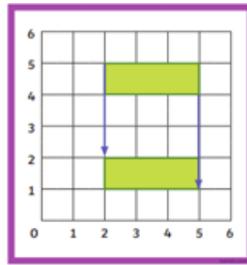
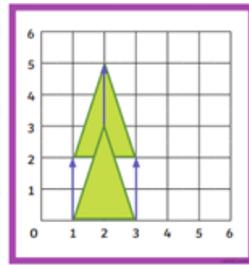
In maths, translation means moving an object on a grid.

The object is moved without changing the size, turning or reflecting it.

When translating a **2D shape** on a grid we have to make sure that **each corner** of the shape is moved the **same direction** and the **same number**.

Click on the green parallelogram to translate it **right 1, down 2** on the grid.

## Translations: Group Task



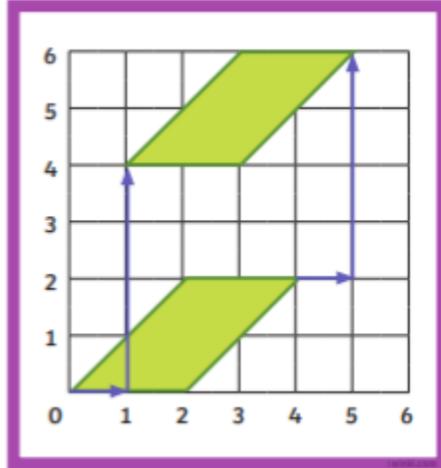
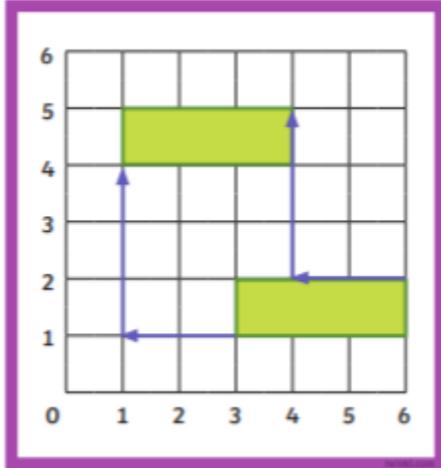
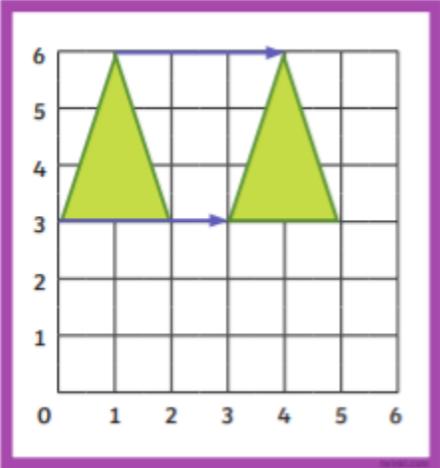
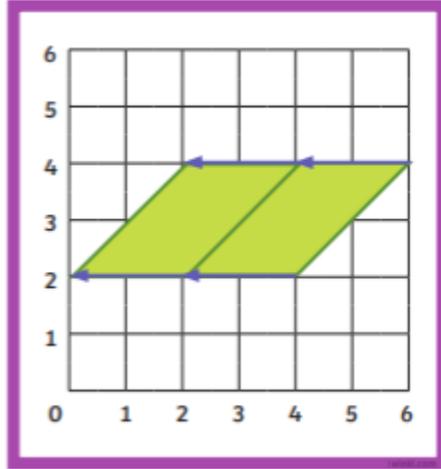
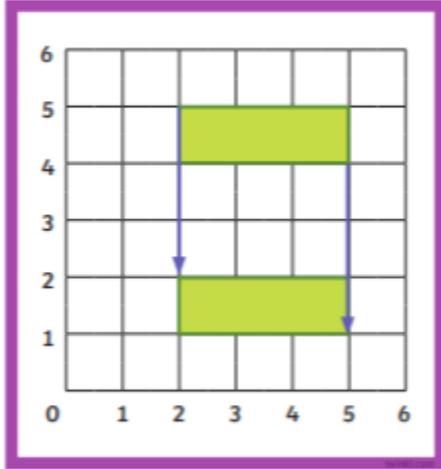
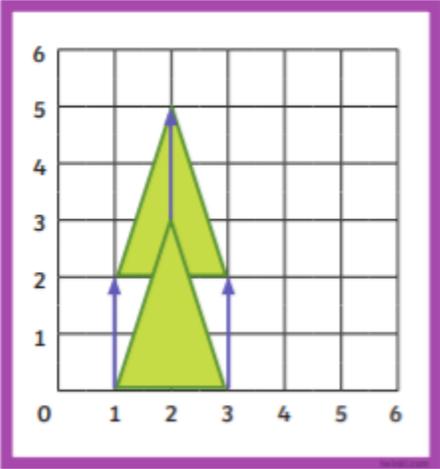
Match the translated shapes to the correct instructions.

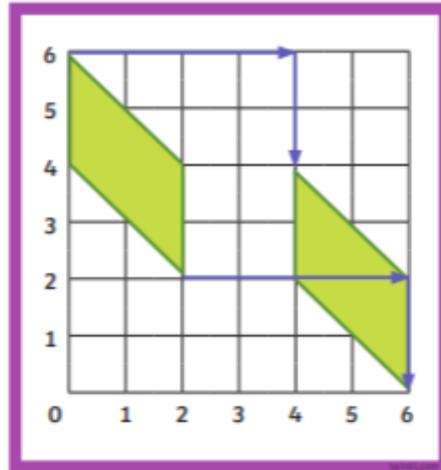
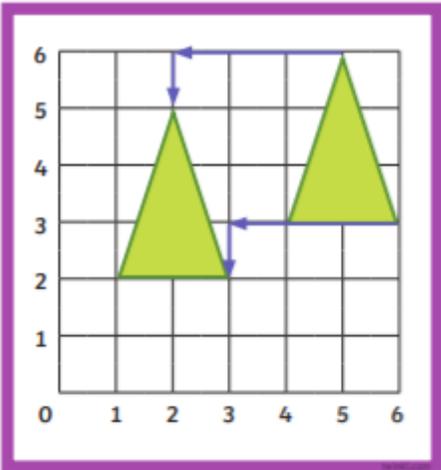
**Down 3**

**Left 2**

**Right 3**

Use the arrows to help you!





**Up 2**

**Down 3**

**Left 2**

**Right 3**

**Left 2**  
**Up 3**

**Right 1**  
**Up 4**

**Left 3**  
**Down 1**

**Right 4**  
**Down 2**

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