





















Position and Direction: Coordinate Polygons

<p>Aim: Plot specified points and draw sides to complete a given polygon.</p> <p>I can plot coordinates to draw polygons.</p>	<p>Success Criteria: I can label the x-axis and y-axis.</p> <p>I know that a coordinate is represented by two numbers in brackets, separated by a comma.</p> <p>I can read a coordinate correctly by going along and then up.</p>	<p>Resources: Lesson Pack</p>
<p>Key/New Words: Coordinate, axis, quadrant, polygon.</p>	<p>Preparation: Coordinate Squares Resource Sheet - per pair Differentiated Coordinate Polygons Activity Sheets - per child Sheepdog Championship Resource Sheet - per group (max 6)</p>	

Prior Learning: It will be helpful if children know how to read and write coordinates accurately.

Learning Sequence

	<p>Wizard Potions: Using the interactive slides on the Lesson Presentation the children are challenged to collect the ingredients for wizard's potion by clicking on the correct position on the 2D grid for the coordinate given.</p>	
	<p>Reading, Writing and Plotting Coordinates: Use the information and images on the Lesson Presentation to rehearse that a coordinate is a way to locate a position on a map or graph by indicating how many units along, and how many units up the position is. Recap the features of coordinates and how they are recorded inside brackets, separated by a comma. Emphasise at all times the importance of reading and writing coordinates in the correct order (along then up).</p>	
	<p>Coordinate Squares: The children work together in their pairs to plot the given coordinates of four different size squares on the Coordinate Squares Resource Sheet.</p>	
	<p>Spot the Mistake: Using the Lesson Presentation, look at the shapes plotted on the grid from the given coordinates and discuss which coordinate has been incorrectly plotted and why the mistake may have been made.</p>	
	<p>Coordinate Polygons: Children complete the differentiated Coordinate Polygons Activity Sheets; to demonstrate they can plot coordinates to draw polygons.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div data-bbox="217 1272 587 1391">  <p>Plot the coordinates given on a 6 by 6 grid to draw simple 2D shapes and name them.</p> </div> <div data-bbox="619 1272 989 1391">  <p>Plot the coordinates given on a 10 by 10 grid to draw more complex 2D shapes and name them.</p> </div> <div data-bbox="1021 1272 1391 1424">  <p>Plot the coordinates given on a 10 by 10 grid to draw more complex 2D shapes and name them and calculate the perimeter.</p> </div> </div>	
	<p>Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative activity. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.</p> <div style="margin-top: 10px;">  <p>The children plot given points on coordinate grids and then plot the missing points to create different quadrilaterals.</p> </div> <div style="margin-top: 10px;">  <p>The children use their reasoning skills to investigate if five coordinate points will always make a pentagon.</p> </div> <div style="margin-top: 10px;">  <p>The children work on an open-ended problem solving activity, investigating plotting vertices of triangles and quadrilaterals on a coordinate grid which have a shared vertex.</p> </div>	
	<p>Sheepdog Championship: Using the Sheepdog Championship Resource Sheet the children take it in turns to take a card off the pile and plot the given coordinates on their game board. They successfully round up all the sheep within the shape created. The winner is the player who rounds up the most sheep after four goes.</p>	

Exploreit

Enlargeit: Using string, go large scale and plot the coordinates of a shape on large grid. Link to work on perimeter and area.

Alphabetit: Investigate plotting capital letters on a coordinate grid and recording the coordinate positions.

Pictureit: Try designing pictures on a coordinate grid and writing the coordinate positions for a friend to follow.



Maths

Position and Direction



Coordinate Polygons

Aim

- I can plot coordinates to draw polygons.

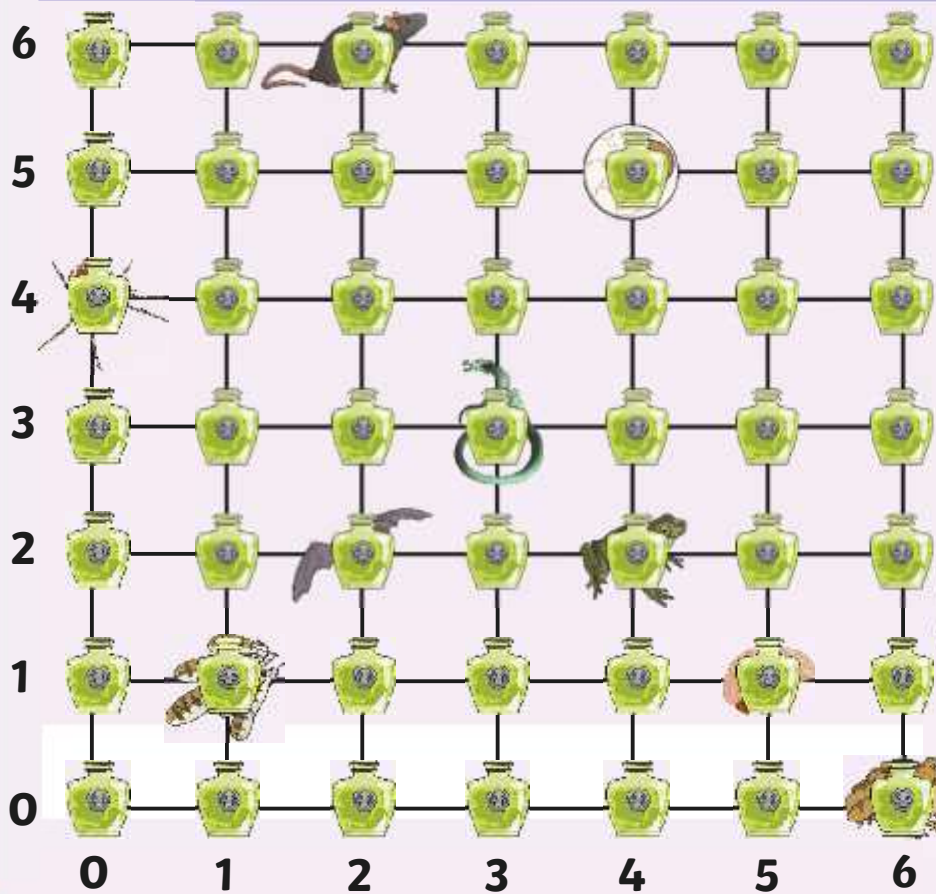
Success Criteria

- I can label the x-axis and y-axis.
- I know that a coordinate is represented by two numbers in brackets, separated by a comma.
- I can read a coordinate correctly by going along then up.

Wizard Potions



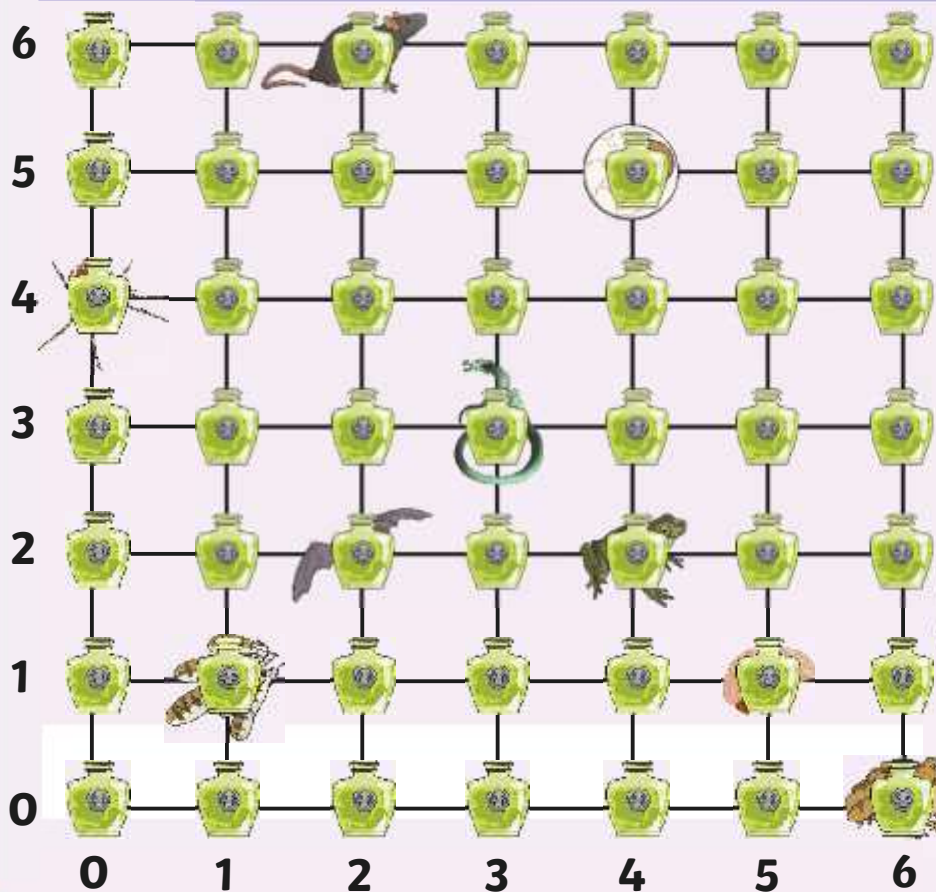
Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.



Wizard Potions



Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.

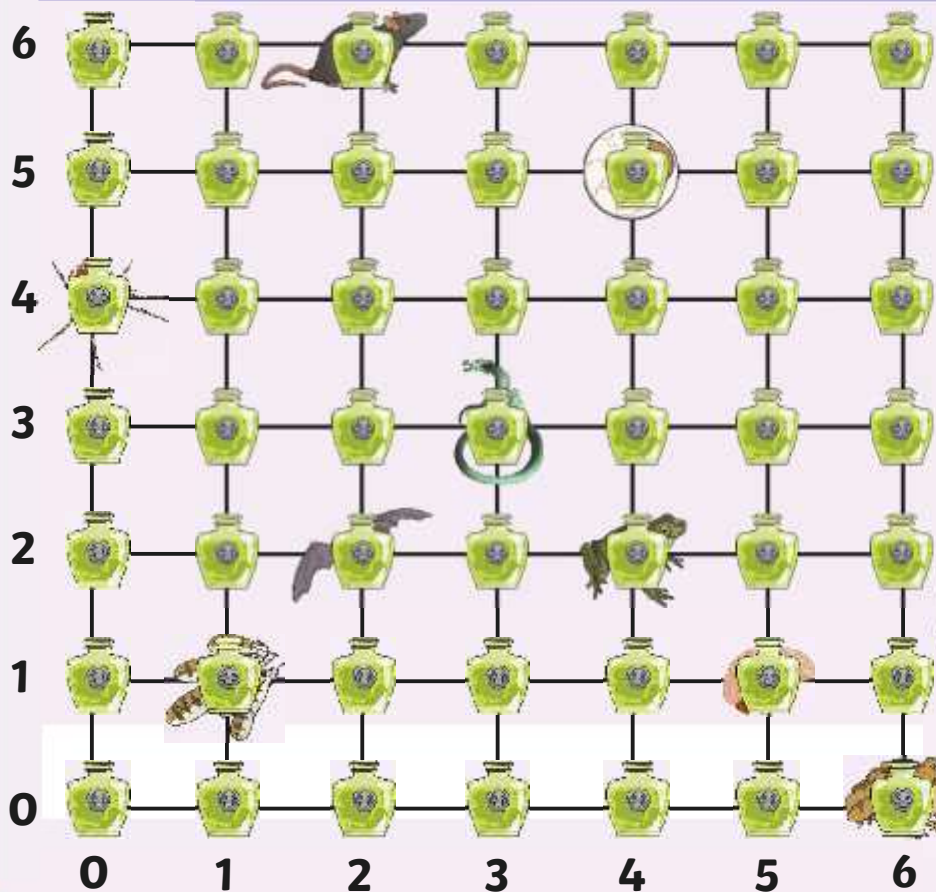


Rat's Tail
(2,6)

Wizard Potions



Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.



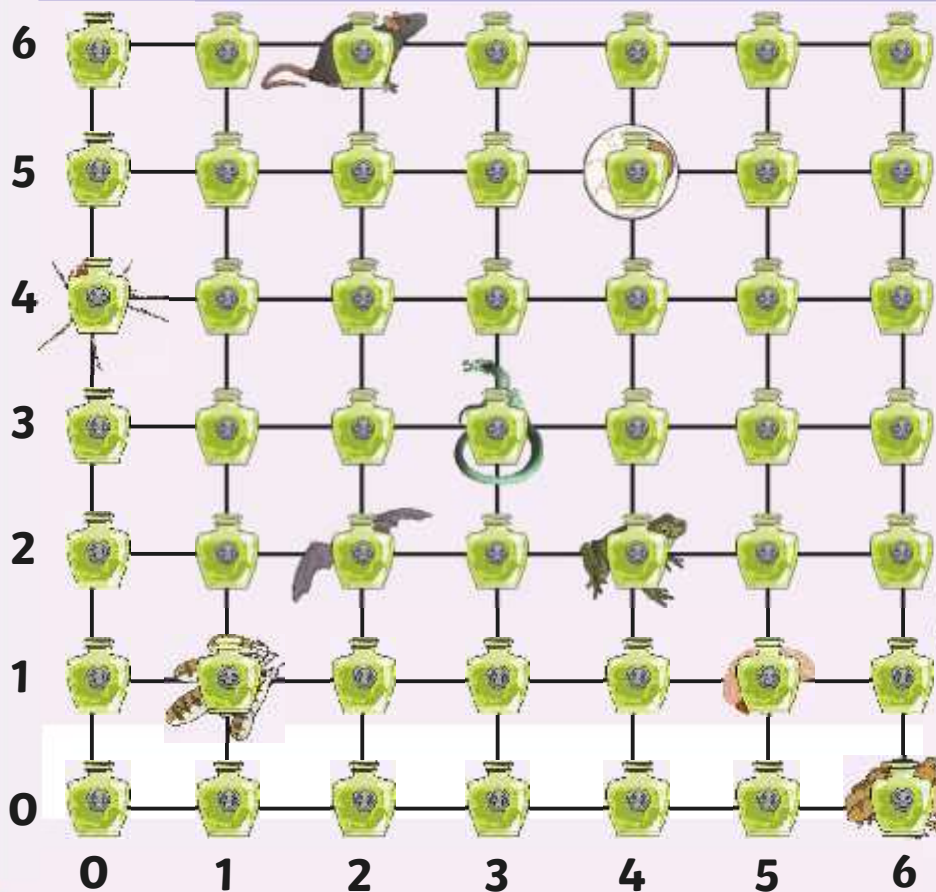
Phoenix Feathers
(1,1)



Wizard Potions



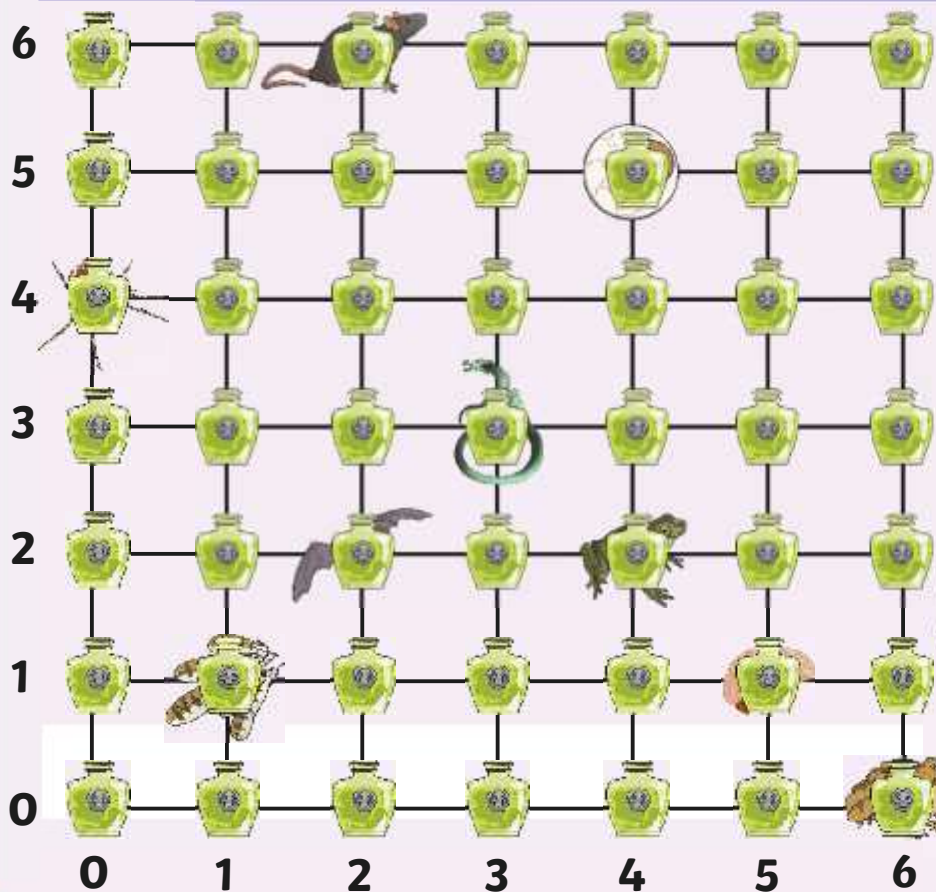
Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.



Wizard Potions



Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.

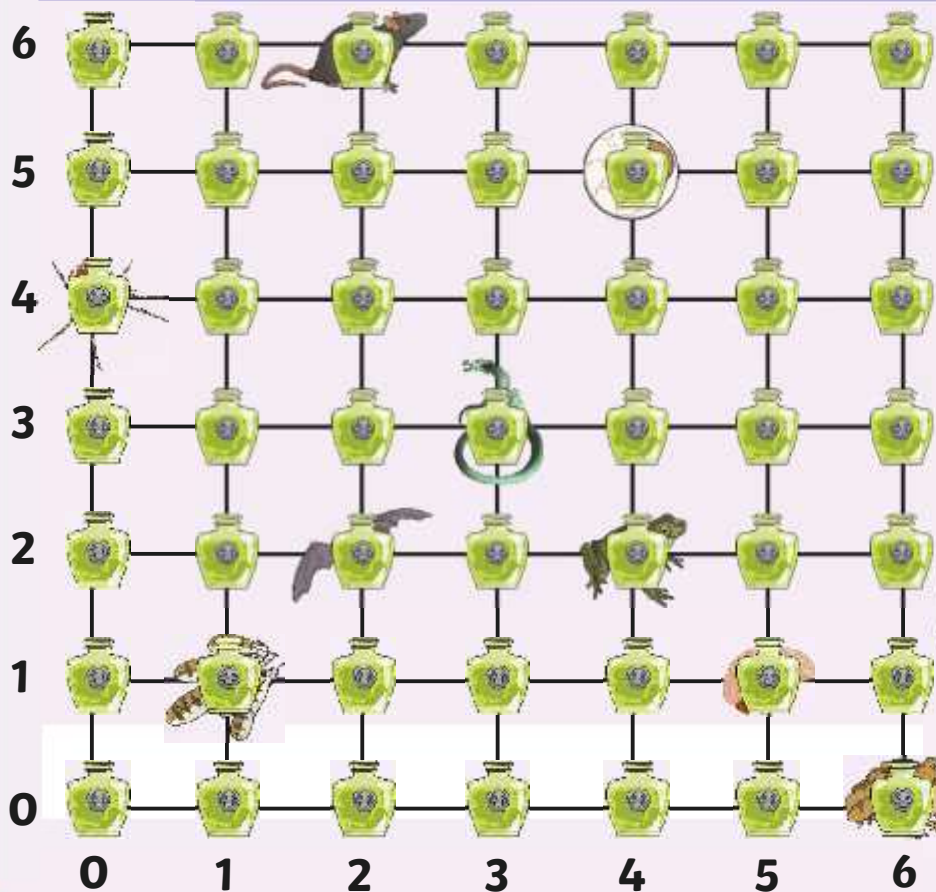


Eyeballs
(4,5)

Wizard Potions



Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.



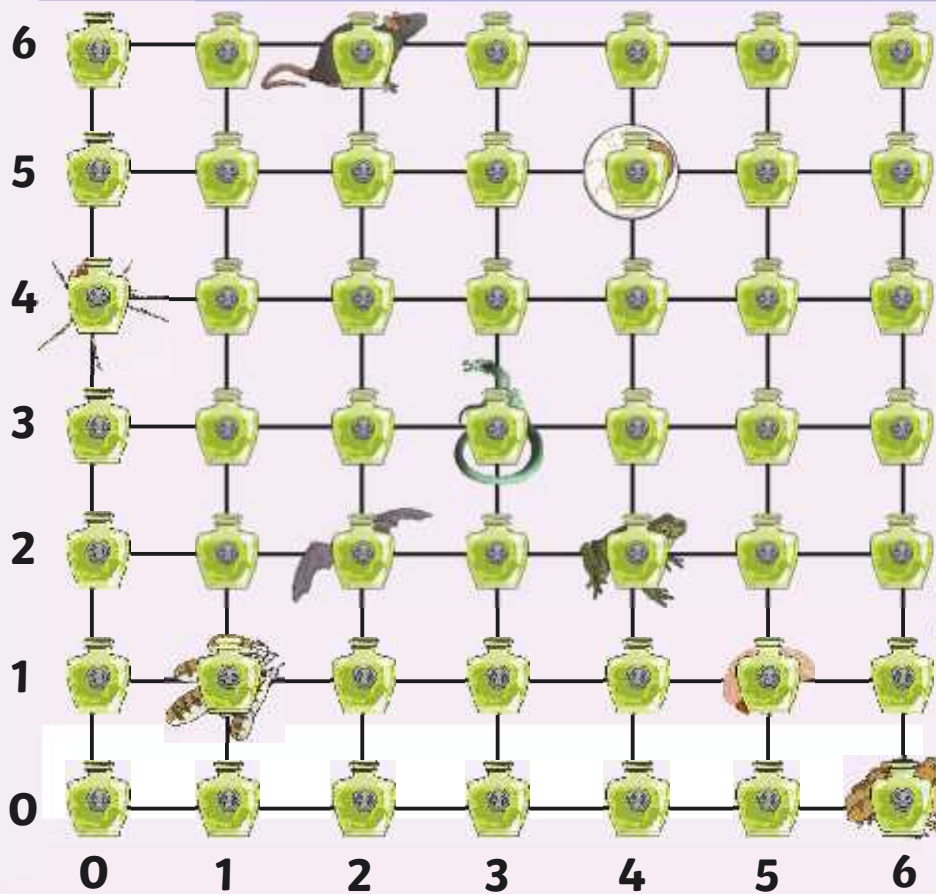
**Bat Wings
(2,2)**



Wizard Potions



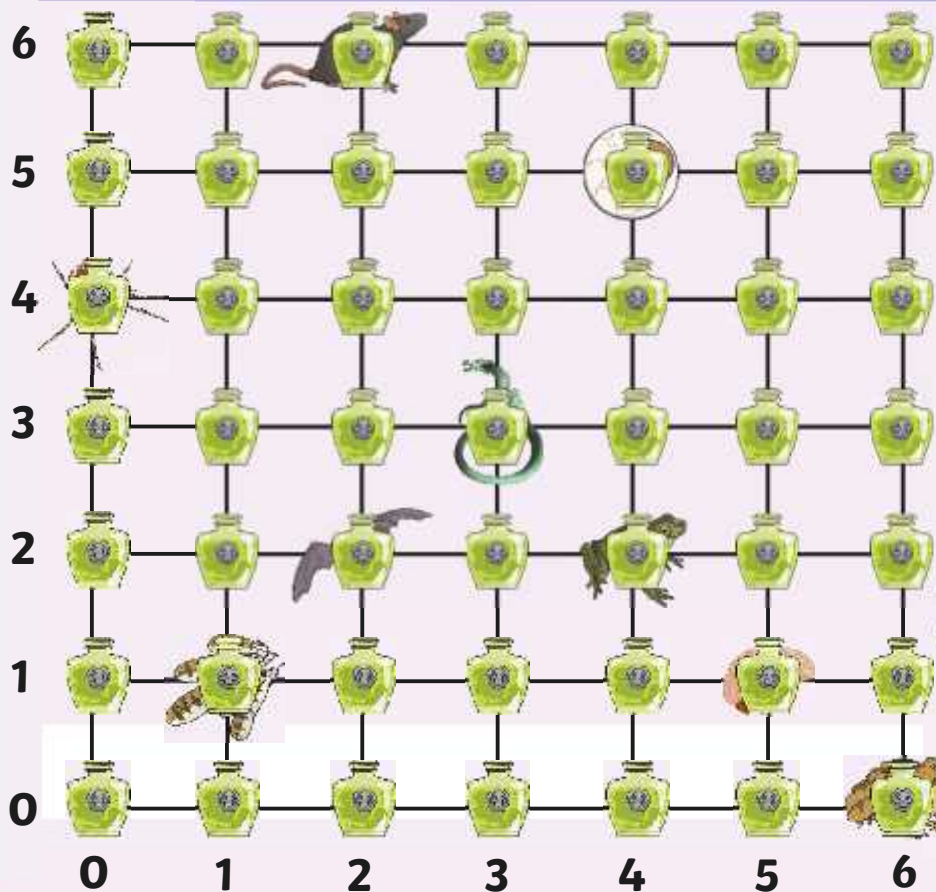
Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.



Wizard Potions



Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.

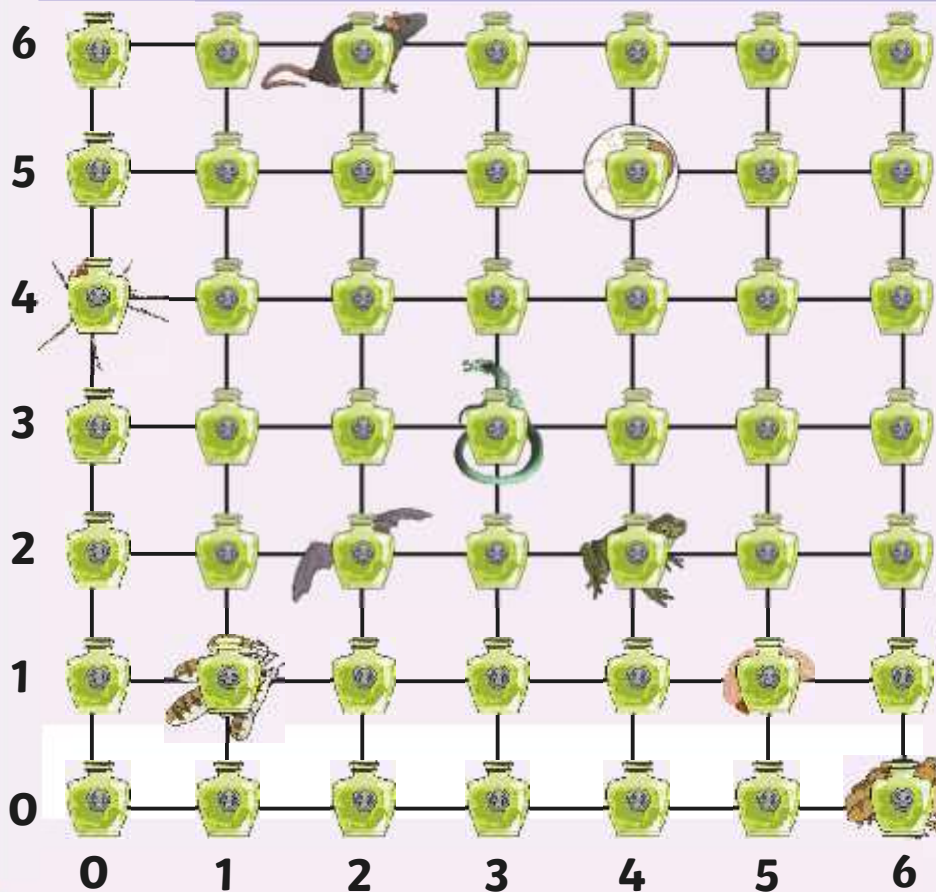


Brain
(5,1)

Wizard Potions



Collect the ingredients to help the wizard concoct his potion, by reading and plotting the coordinates correctly.



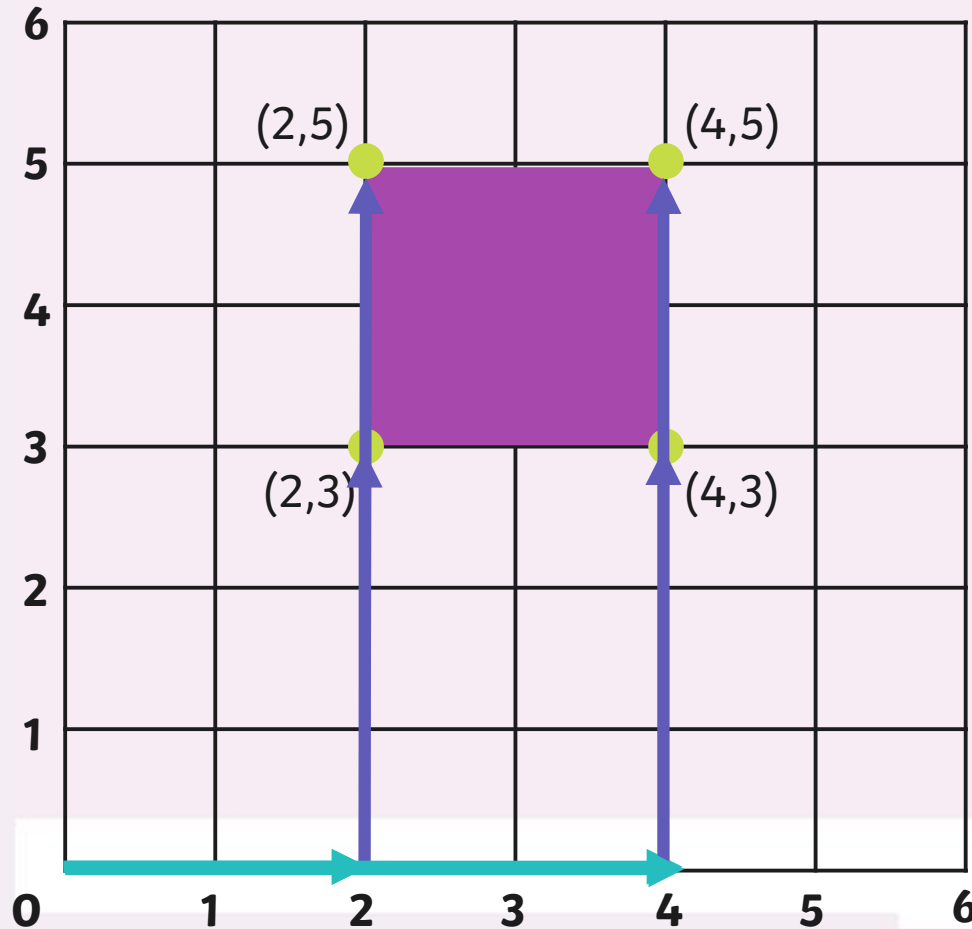
Dragon Scales
(3,3)



Thank you for helping me to collect my potion ingredients. Click on the cat to see the potion at work.



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**.

Coordinate Squares



Work with your partners to plot the coordinate corners of the four different sized squares.



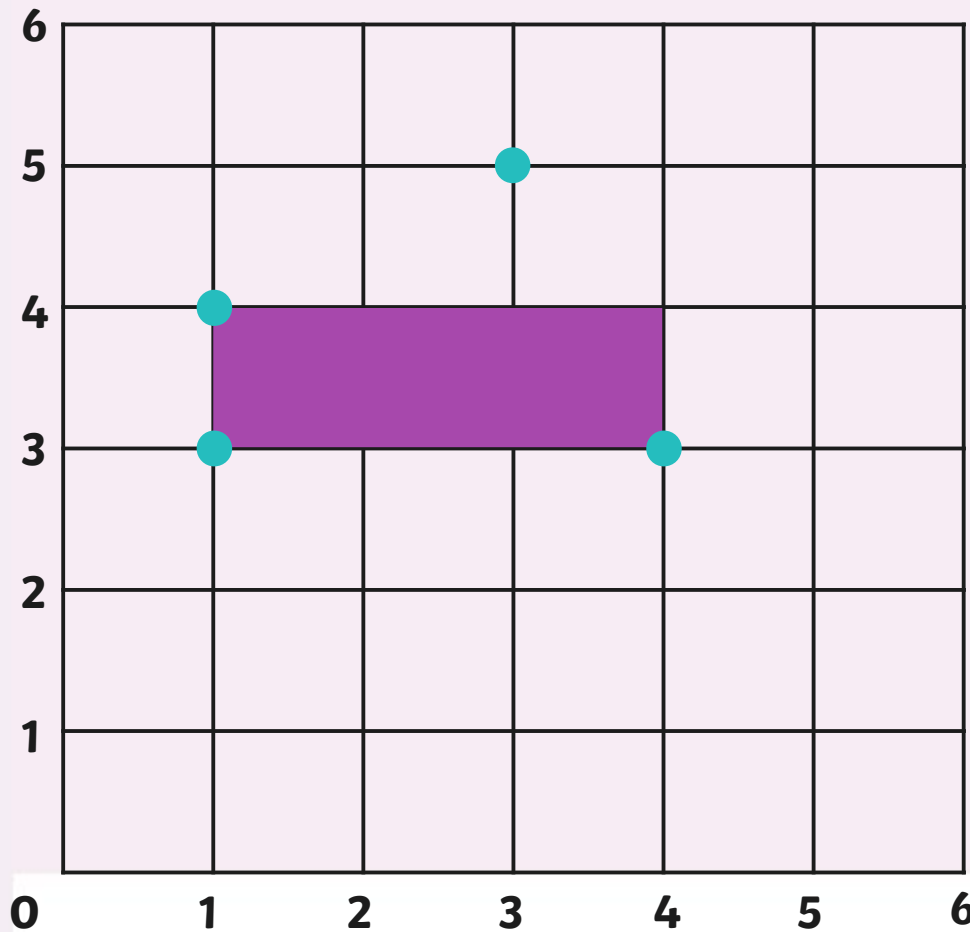
Coordinate Squares

I can plot co-ordinates to draw polygons.

Plot the given co-ordinates to draw four squares of different sizes.

<p>(2,1) (4,1) (4,3) (2,3)</p>	<p>(1,0) (1,3) (4,0) (4,3)</p>
<p>(2,2) (6,6) (2,6) (6,2)</p>	<p>(0,6) (5,6) (5,1) (0,1)</p>

Spot the Mistake



When plotted, these coordinates should make a rectangle that looks like this:



(1,3)

(4,4)

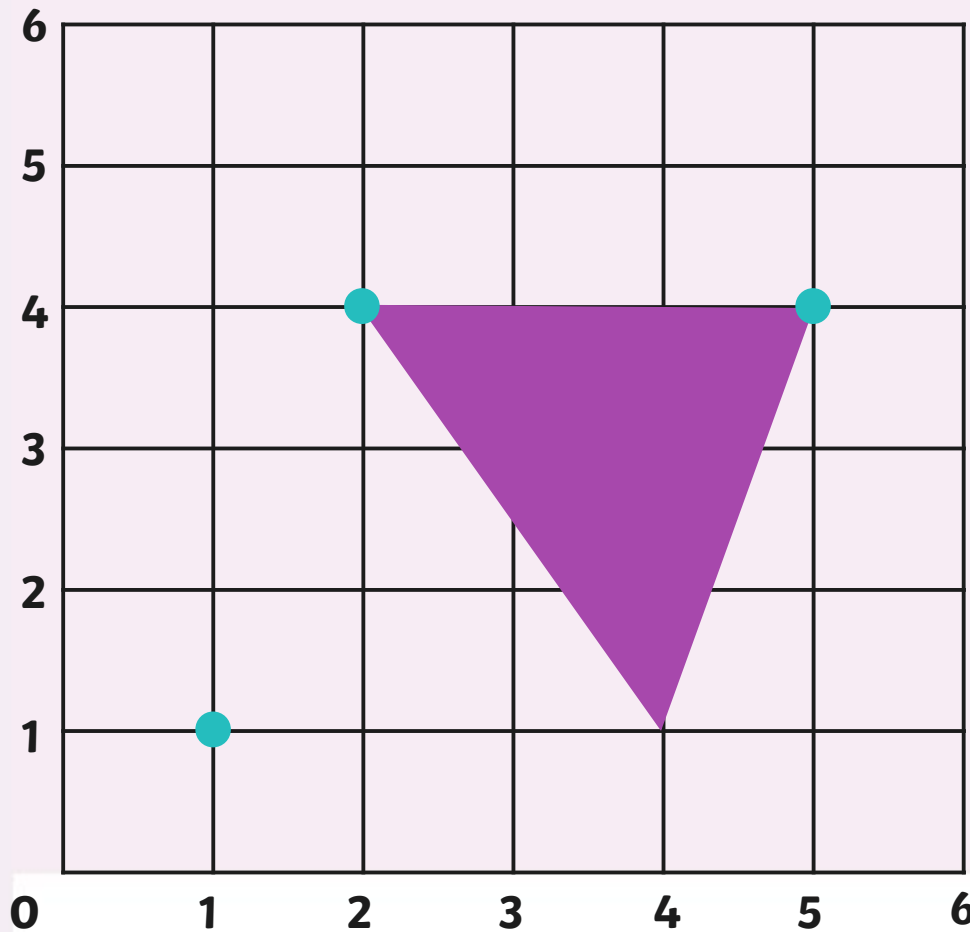
(4,3)

(1,4)

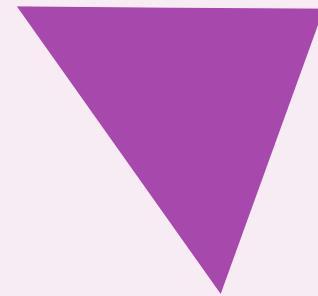
Click on them and decide which coordinate has been plotted incorrectly.

Show Answer

Spot the Mistake



When plotted, these coordinates should make a triangle that looks like this:



(5,4)

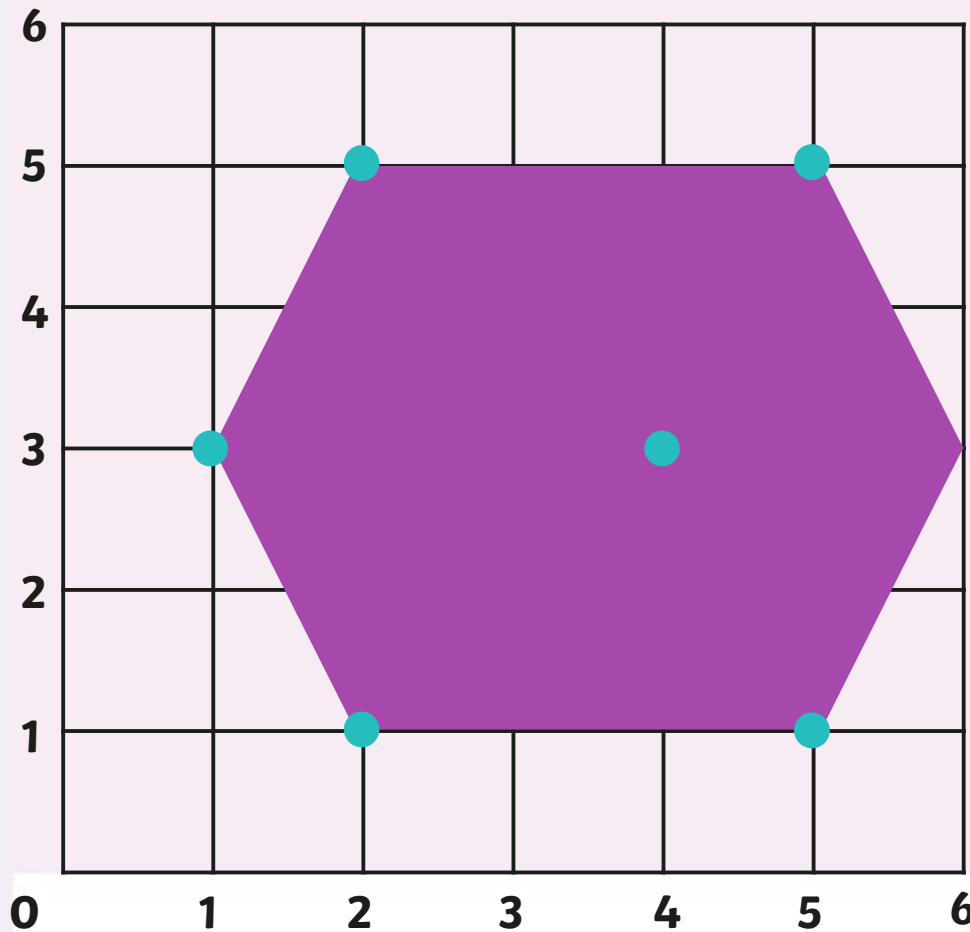
(4,1)

(2,4)

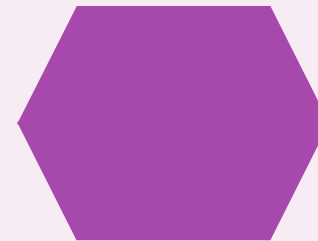
Click on them and decide which coordinate has been plotted incorrectly.

Show Answer

Spot the Mistake



When plotted, these coordinates should make a hexagon that looks like this:



(2,1)

(5,5)

(5,1)

(2,5)

(6,3)

(1,3)

Click on them and decide which coordinate has been plotted incorrectly.

Show Answer

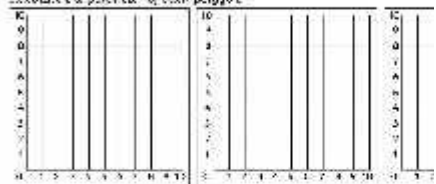
Coordinate Polygons



Coordinate Polygons

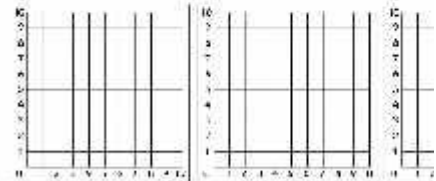
Use grid lines to draw polygons.

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 and calculate the perimeter of each polygon.



1. (1,1) (3,6) (8,7)
2. (3,2) (6,9) (2,7)
3. (0,7)

Polygon =
Perimeter =



4. (1,0) (1,9) (9,1) (9,1)
5. (3,8) (3,2) (6,3) (6,8)
6. (5,1)

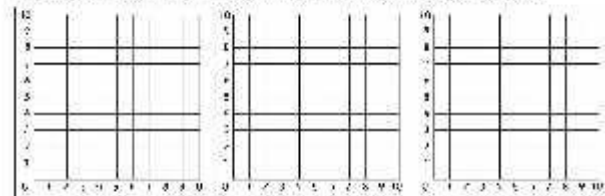
Polygon =
Perimeter =



Coordinate Polygons

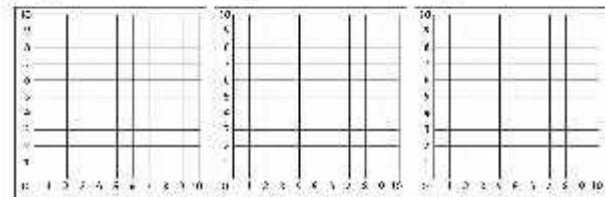
Use grid lines to draw polygons.

Plot the given co-ordinates on the grid and join them up to identify the polygon.



1. (0,3) (3,6) (6,3) (3,0)
2. (3,2) (5,9) (7,2)
3. (3,3) (4,6) (10,0)

Polygon = Polygon = Polygon =



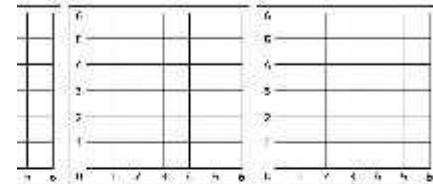
4. (1,0) (7,0) (0,1) (3,1)
5. (3,8) (8,2) (4,3) (4,6)
6. (5,10) (8,7) (5,0) (2,7)

Polygon = Polygon = Polygon =

Coordinate Polygons

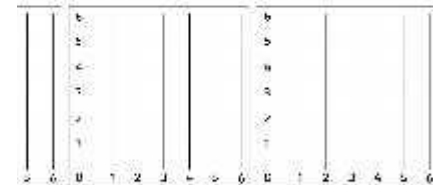
Use grid lines to draw polygons.

Plot the given co-ordinates on the grid and join them up to identify the polygon.



1. (1,1) (5,0) (5,5) (0,5)
2. (1,1) (1,6) (7,7) (7,4)

Polygon = Polygon =



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

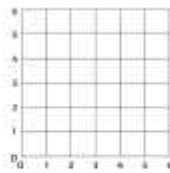
Polygon = Polygon =

Diving into Mastery

Dive in by completing your own activity!

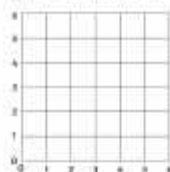


1) Plot these coordinates onto the grid. Plot two more points to make a square.



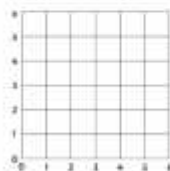
$(1, 2)$, $(2, 3)$

2) Plot these coordinates onto the grid. Plot two more points to make a rectangle.



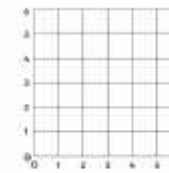
$(1, 3)$, $(2, 5)$

3) Plot these coordinates onto the grid. Plot two more points to make a parallelogram.




$(1, 1)$, $(4, 1)$

1) Plot these coordinates onto the grid. Plot two more points to make a square.




$(2, 2)$, $(2, 3)$

2) Plot these coordinates onto the grid. Plot two more points to make a parallelogram.



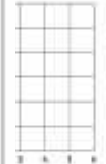
$(1, 3)$, $(5, 3)$

3) Plot these coordinates onto the grid. Plot two more points to make a rectangle.

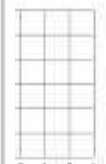


$(1, 1)$, $(4, 1)$

4) Complete the grid. Plot make a rectangle.



5) Complete the grid. Plot make a kite.

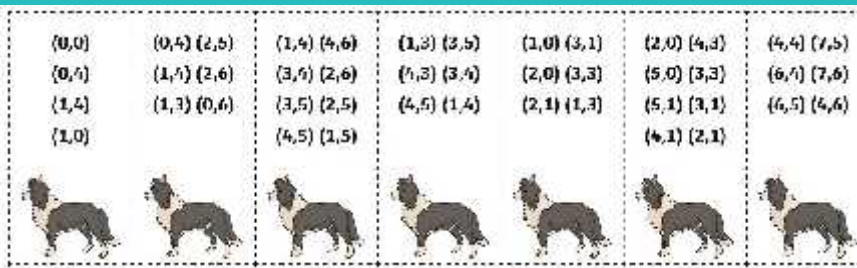


Sheepdog Championship



Sheepdog Championship Coordinate Game

Put your name on the game board. On your turn, choose a card and plot the coordinates on the game board. You have successfully rounded up all the sheep within the sheep's gaze if plotted. The player who rounds up the most sheep wins.



How to play:

- Take it in turns to take a card from the pile.
- Plot the coordinates written on the card on the game board.
- Count the number of sheep you have rounded up.
- The winner is the player who rounds up the most sheep.

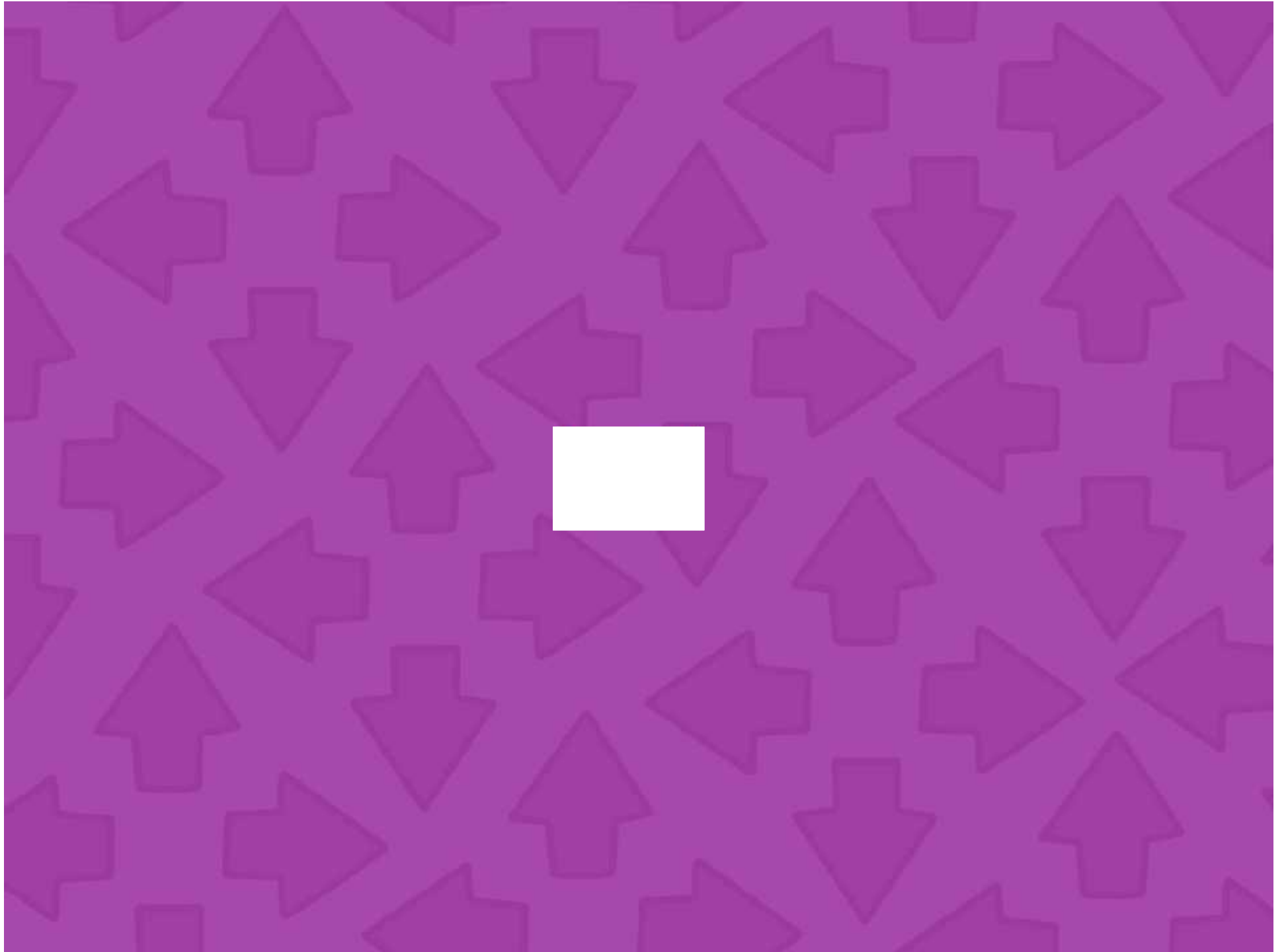
Aim



- I can plot coordinates to draw polygons.

Success Criteria

- I can label the x-axis and y-axis.
- I know that a coordinate is represented by two numbers in brackets, separated by a comma.
- I can read a coordinate correctly by going along then up.

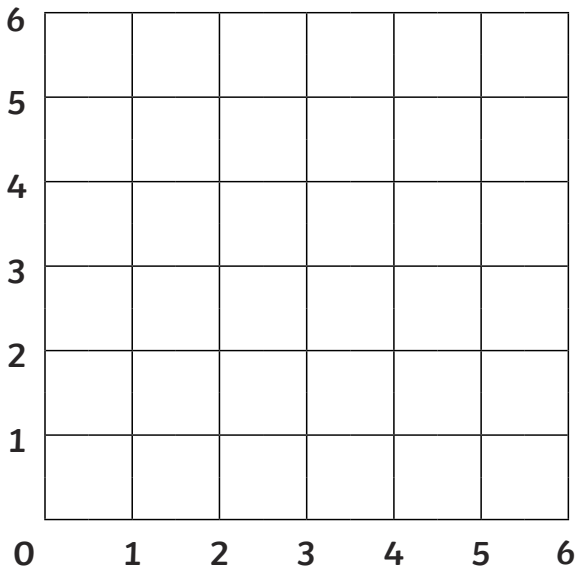


Coordinate Squares

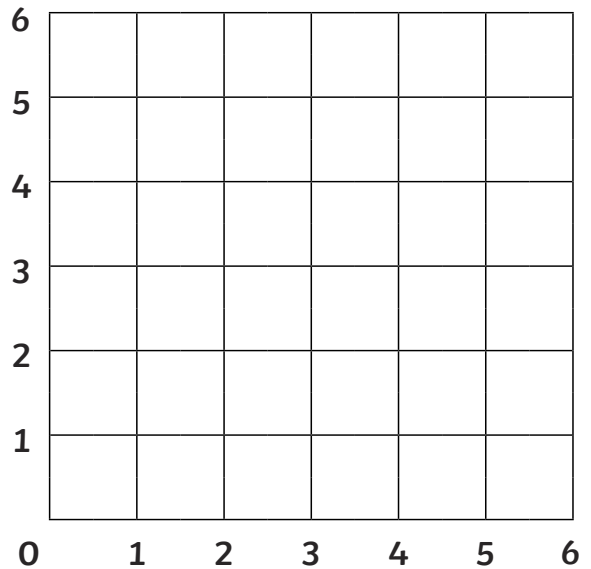
I can plot coordinates to draw polygons.



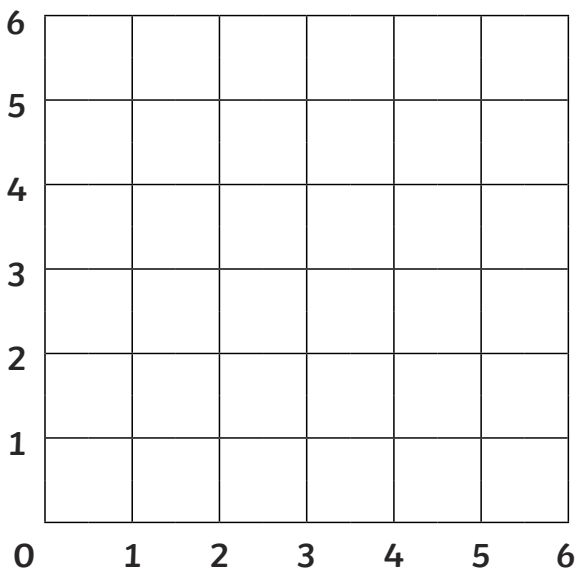
Plot the given coordinates to draw four squares of different sizes.



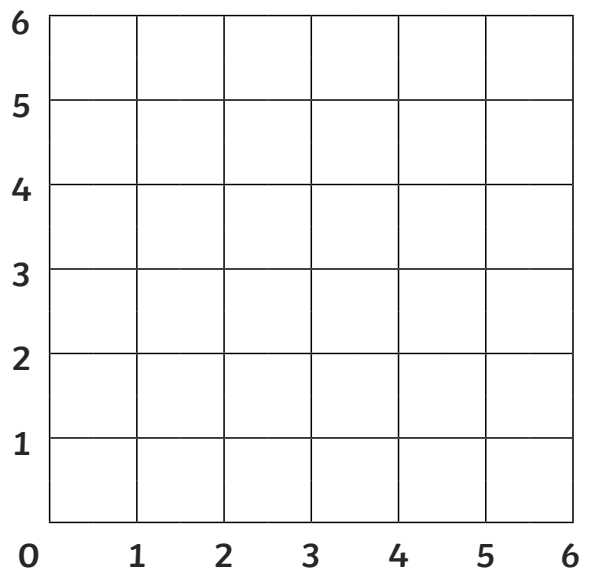
$(2,1)$ $(4,1)$ $(4,3)$ $(2,3)$



$(1,0)$ $(1,3)$ $(4,0)$ $(4,3)$



$(2,2)$ $(6,6)$ $(2,6)$ $(6,2)$



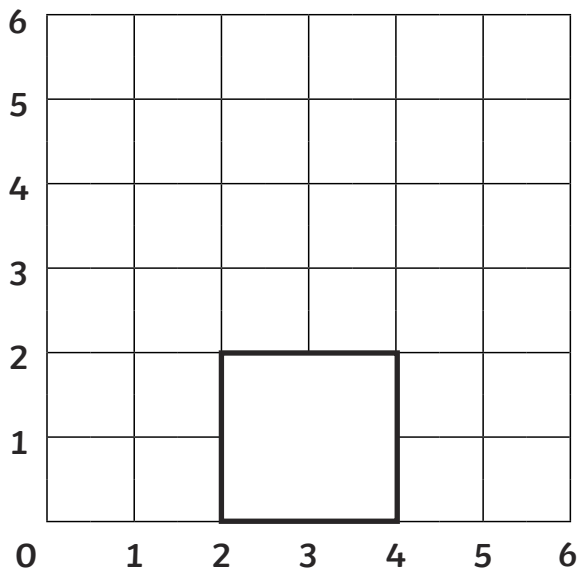
$(0,6)$ $(5,6)$ $(5,1)$ $(0,1)$

Coordinate Squares **Answers**

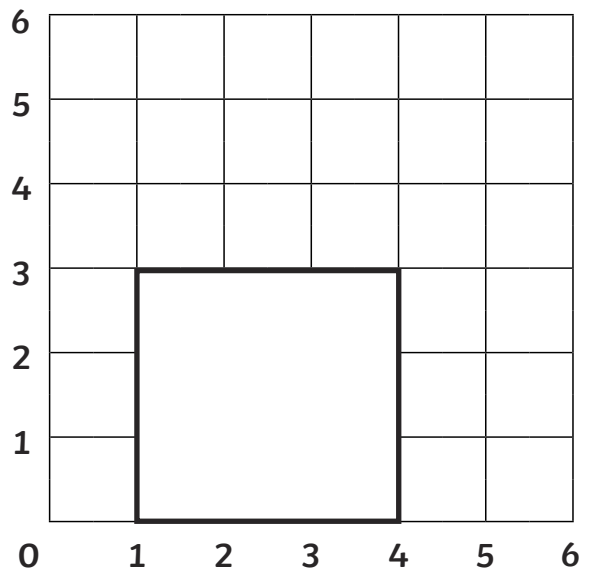
I can plot coordinates to draw polygons.



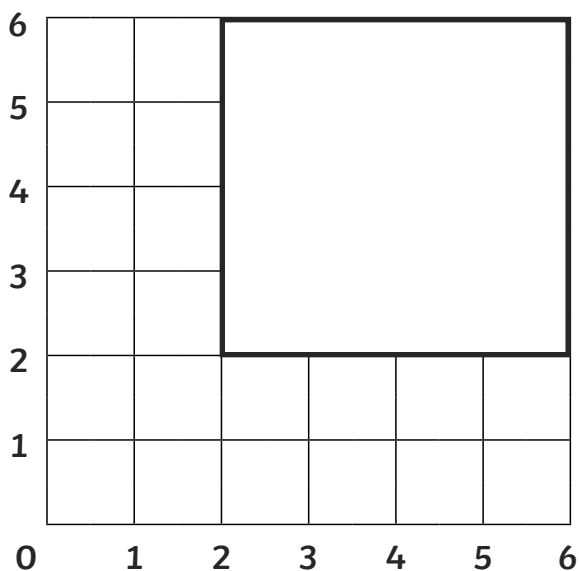
Plot the given coordinates to draw four squares of different sizes.



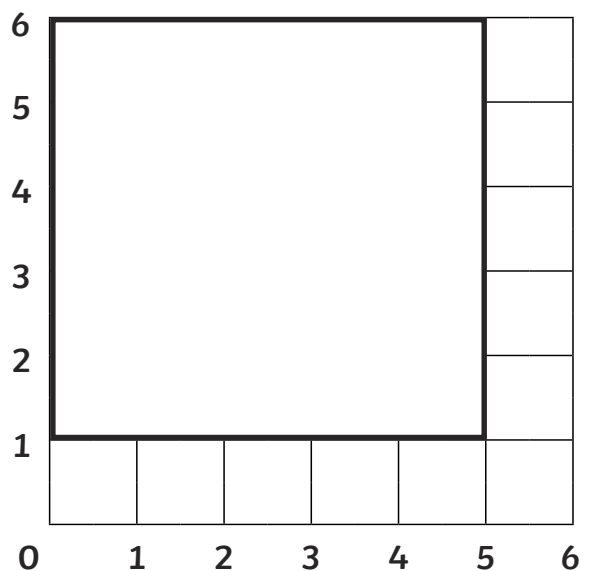
(2,1) (4,1) (4,3) (2,3)



(1,0) (1,3) (4,0) (4,3)



(2,2) (6,6) (2,6) (6,2)



(0,6) (5,6) (5,1) (0,1)

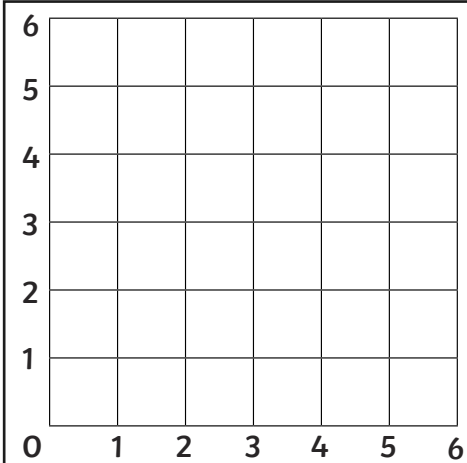


Coordinate Polygons

I can plot coordinates to draw polygons.

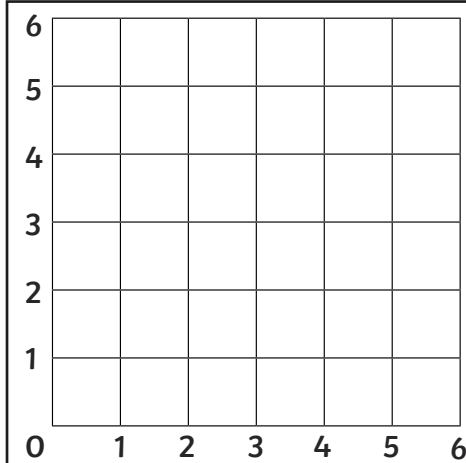


Plot the given coordinates on the grid and join them up to identify the polygon.



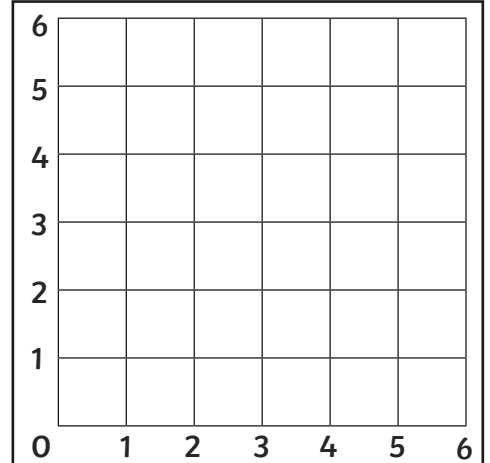
1. (1,1) (5,1) (5,5) (1,5)

Polygon =



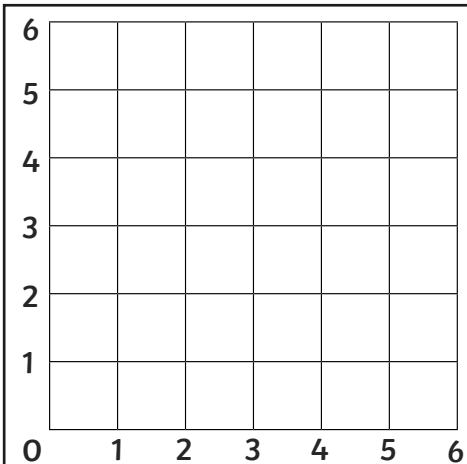
2. (1,3) (5,3) (5,5) (1,5)

Polygon =



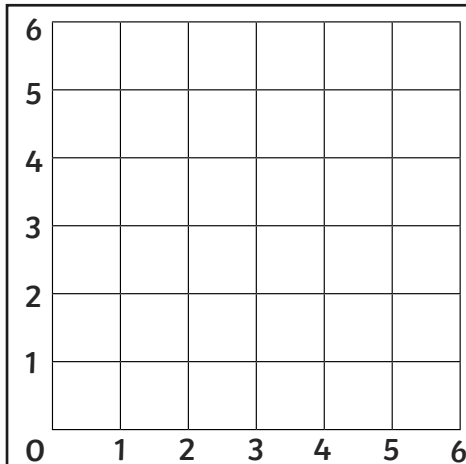
3. (0,3) (3,6) (6,3) (3,0)

Polygon =



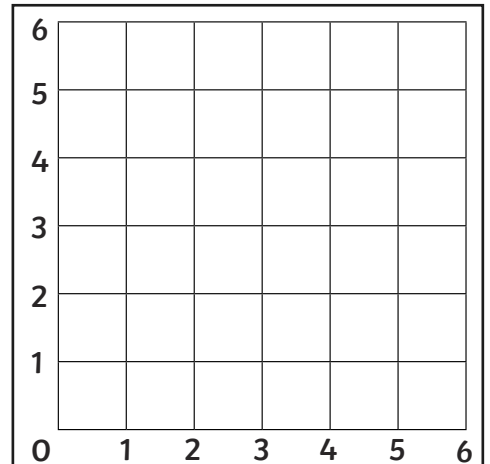
4. (2,6) (4,6) (4,0) (2,0)

Polygon =



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

Polygon =



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

Polygon =

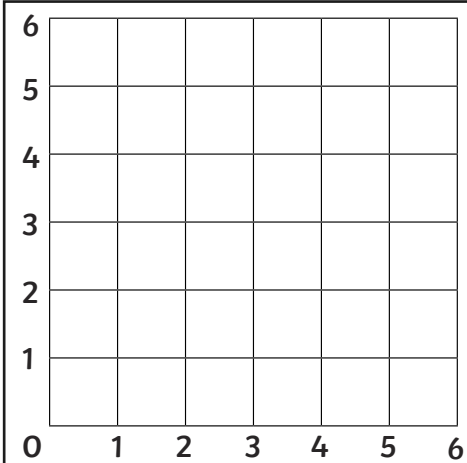


Coordinate Polygons

I can plot coordinates to draw polygons.

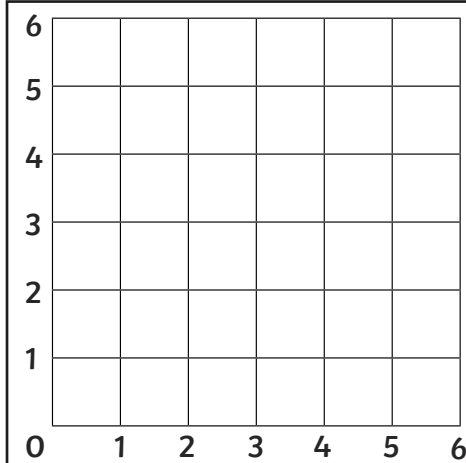


Plot the given coordinates on the grid and join them up to identify the polygon.



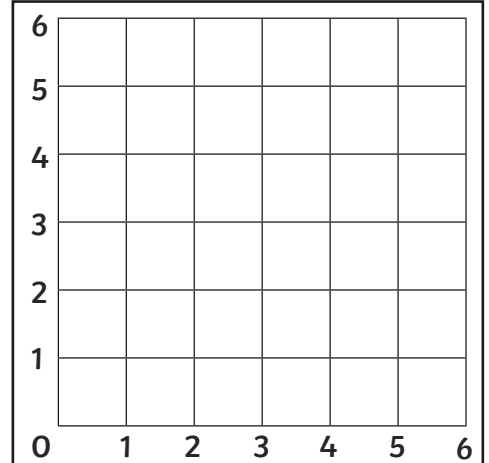
7. (3,5) (5,3) (5,1) (1,1) (1,3)

Polygon =



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

Polygon =



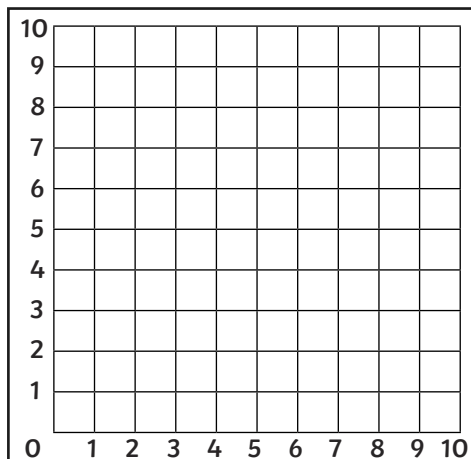
9. (1,5) (2,3) (1,1) (5,1) (4,3) (5,5)

Polygon =

Coordinate Polygons

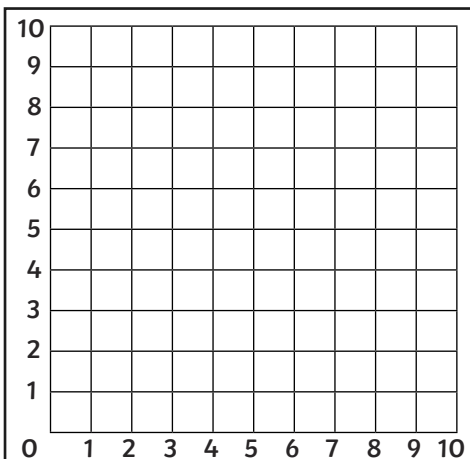
I can plot coordinates to draw polygons.

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



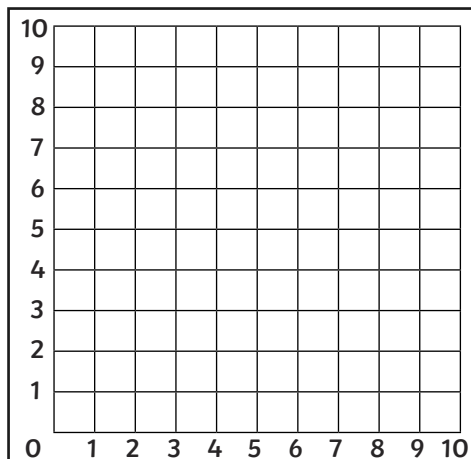
1. $(0,3)$ $(3,6)$ $(6,3)$ $(3,0)$

Polygon =



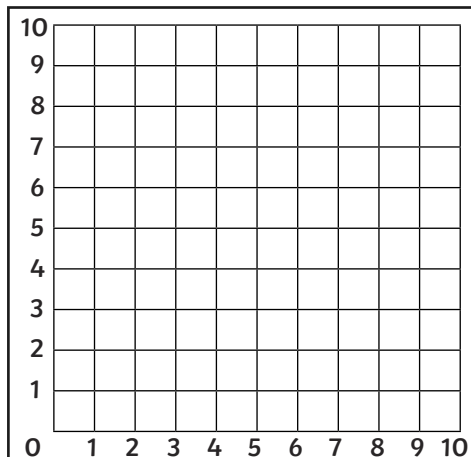
2. $(3,2)$ $(5,9)$ $(7,2)$

Polygon =



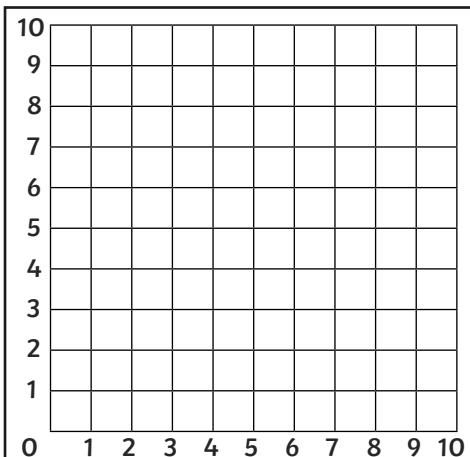
3. $(0,3)$ $(4,6)$ $(10,0)$

Polygon =



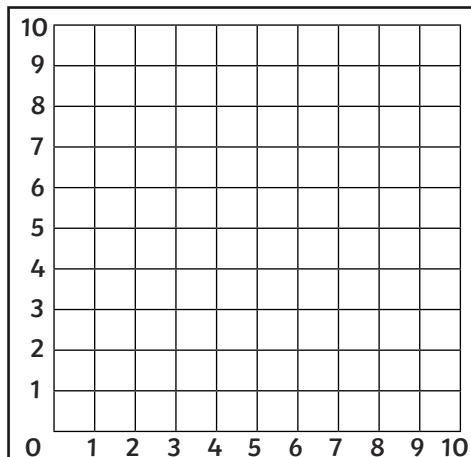
4. $(1,9)$ $(7,9)$ $(9,1)$ $(3,1)$

Polygon =



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

Polygon =



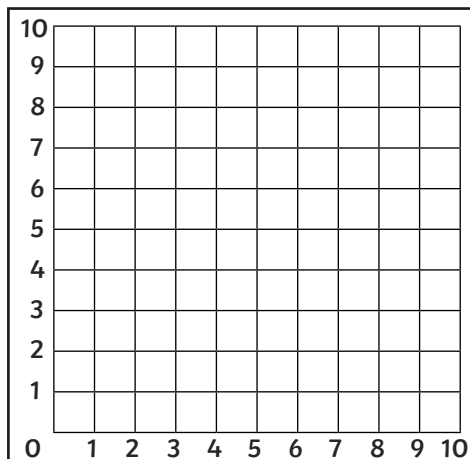
6. $(5,10)$ $(8,7)$ $(5,0)$ $(2,7)$

Polygon =

Coordinate Polygons

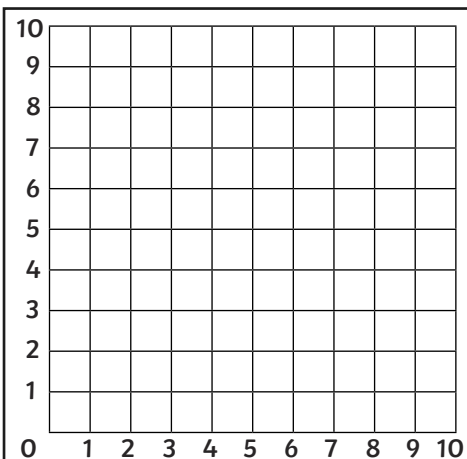
I can plot coordinates to draw polygons.

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



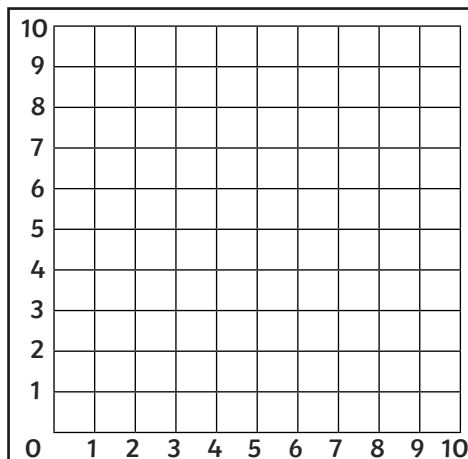
7. (1,9) (1,1) (5,1)
(10,5) (5,9)

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)

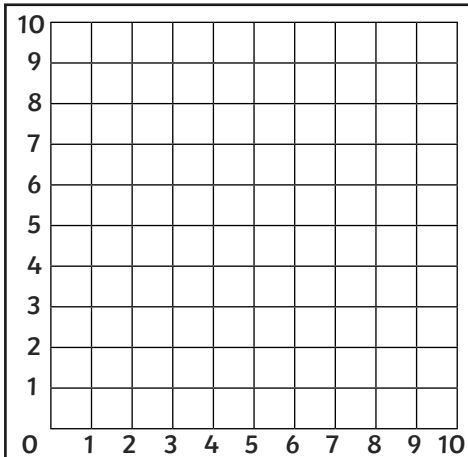
Polygon =

Coordinate Polygons

I can plot coordinates to draw polygons.

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

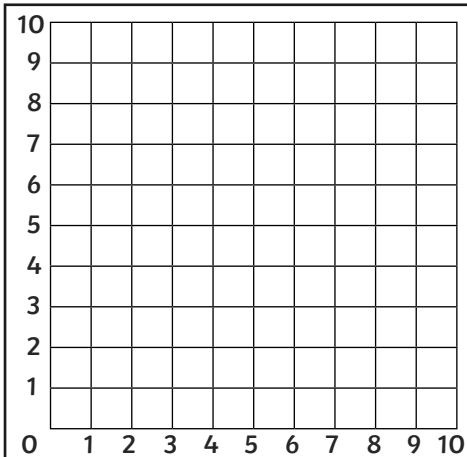
Extra Challenge: Use a ruler to measure the sides of each polygon to the nearest half cm and calculate the perimeter of each polygon.



1. (1,1) (8,8) (8,1)

Polygon =

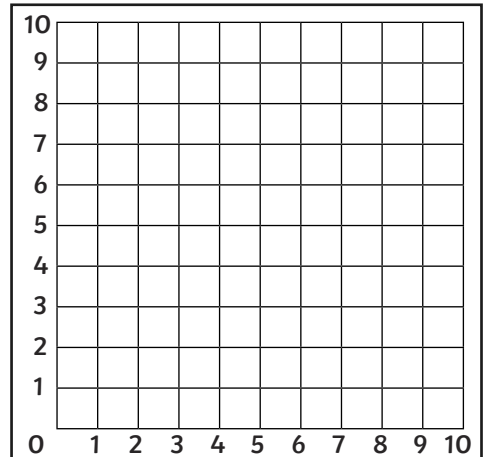
Perimeter =



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

Polygon =

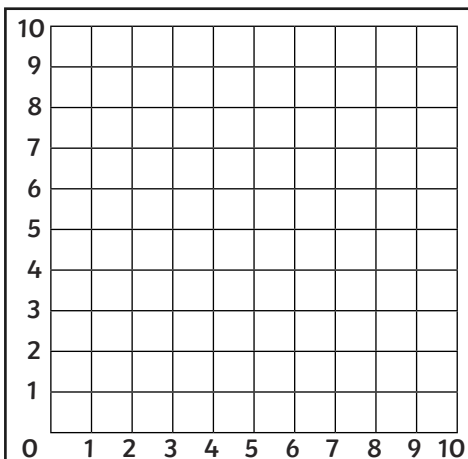
Perimeter =



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

Polygon =

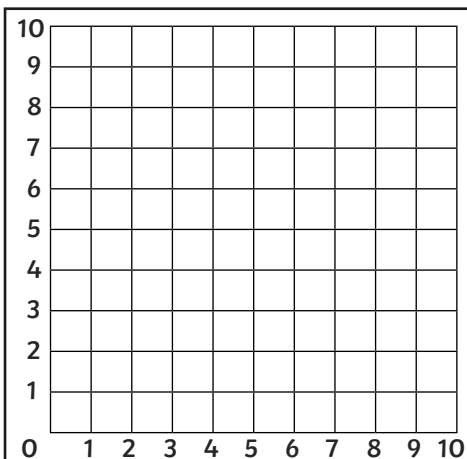
Perimeter =



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

Polygon =

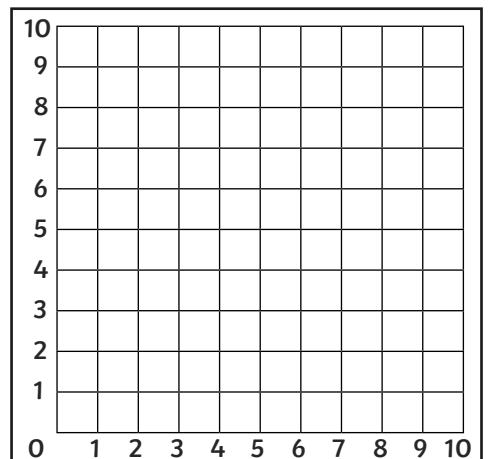
Perimeter =



5. (8,8) (8,2) (4,3) (4,6)

Polygon =

Perimeter =



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

Polygon =

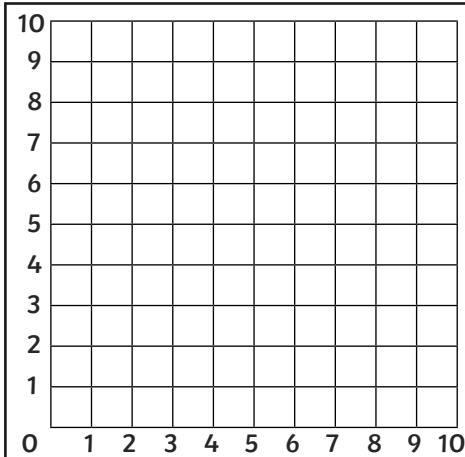
Perimeter =

Coordinate Polygons

I can plot coordinates to draw polygons.

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

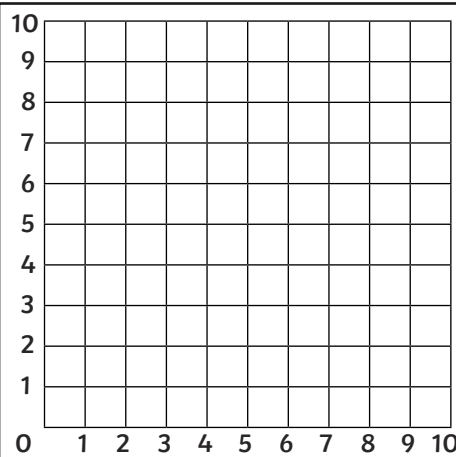
Extra Challenge: Use a ruler to measure the sides of each polygon to the nearest half cm and calculate the perimeter of each polygon.



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

Polygon =

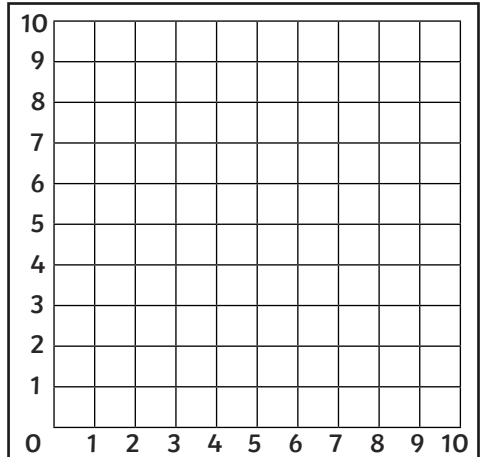
Perimeter =



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

Polygon =

Perimeter =



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

Polygon =

Perimeter =

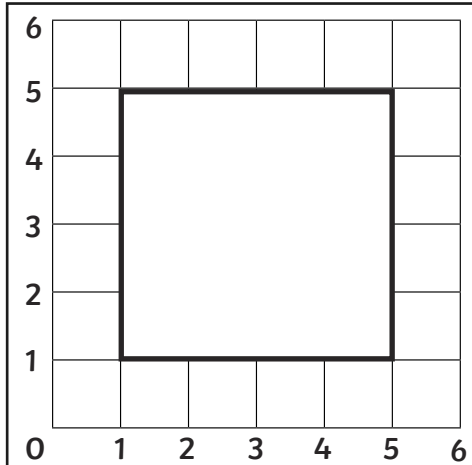


Coordinate Polygons Answers

I can plot coordinates to draw polygons.

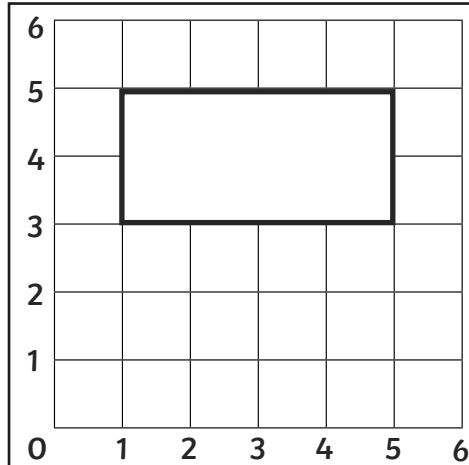


Plot the given coordinates on the grid and join them up to identify the polygon.



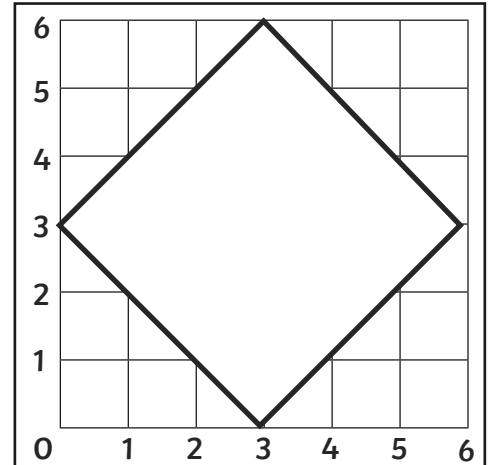
1. $(1,1)(5,1)(5,5)(1,5)$

Polygon = *Square*



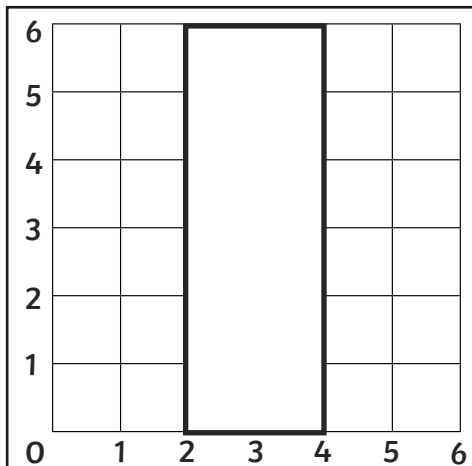
2. $(1,3)(5,3)(5,5)(1,5)$

Polygon = *Rectangle*



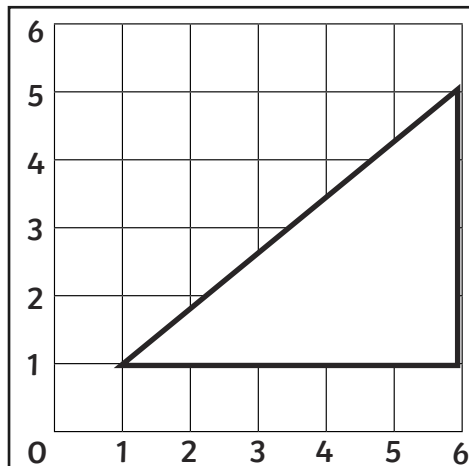
3. $(0,3)(3,6)(6,3)(3,0)$

Polygon = *Square*



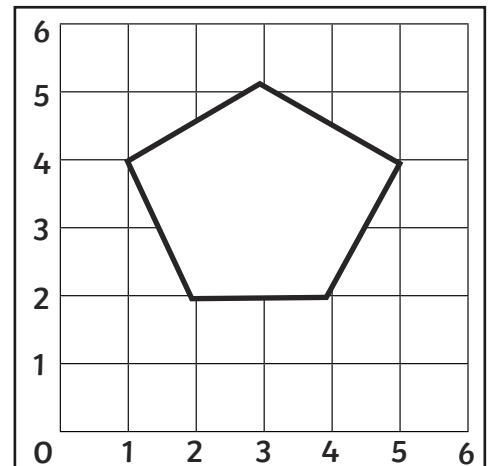
4. $(2,6)(4,6)(4,0)(2,0)$

Polygon = *Rectangle*



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

Polygon = *Right-Angled Triangle*



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

Polygon = *Irregular Pentagon*

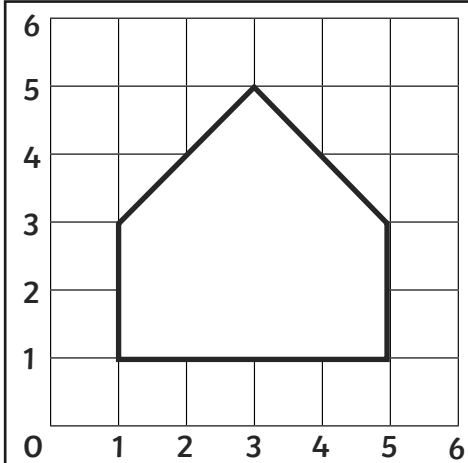


Coordinate Polygons **Answers**

I can plot coordinates to draw polygons.



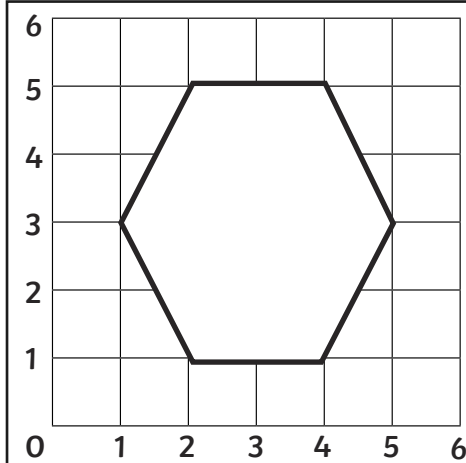
Plot the given coordinates on the grid and join them up to identify the polygon.



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

Irregular

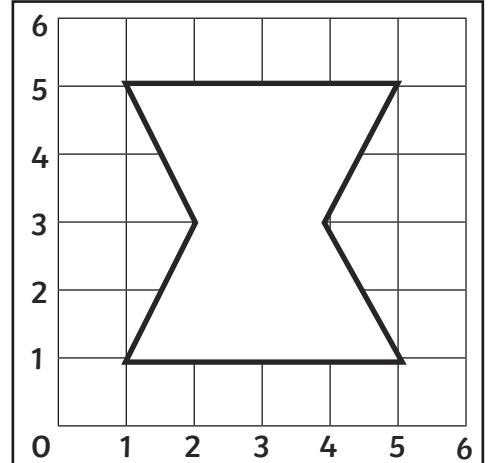
Polygon = *Pentagon*



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

Irregular

Polygon = *Hexagon*



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

Irregular

Polygon = *Hexagon*

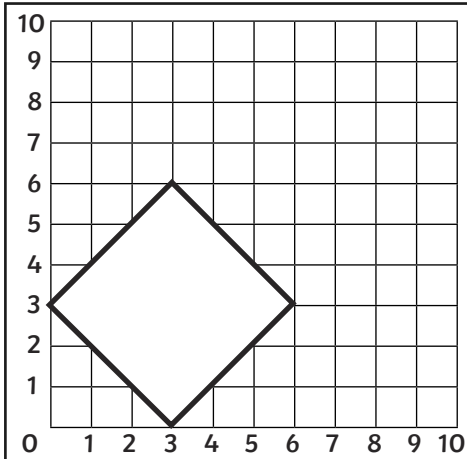


Coordinate Polygons Answers

I can plot coordinates to draw polygons.

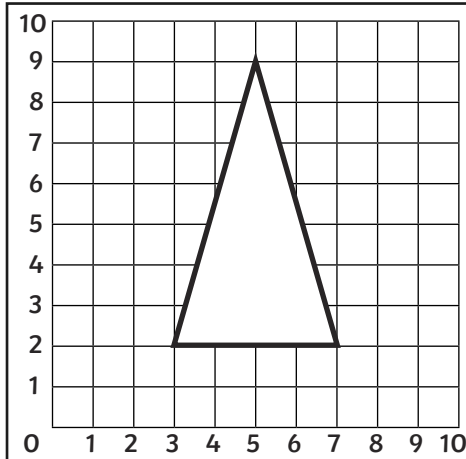


Plot the given coordinates on the grid and join them up to identify the polygon.



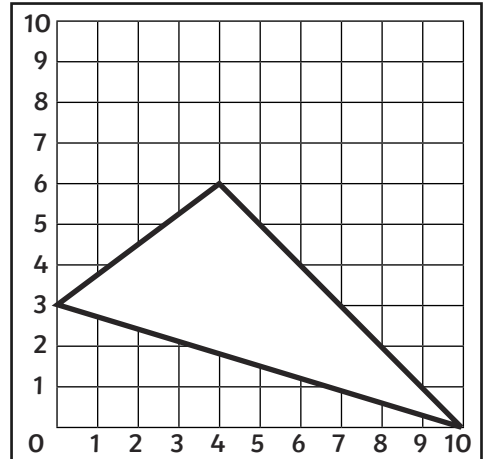
1. (0,3)(3,6)(6,3)(3,0)

Polygon = **Square**



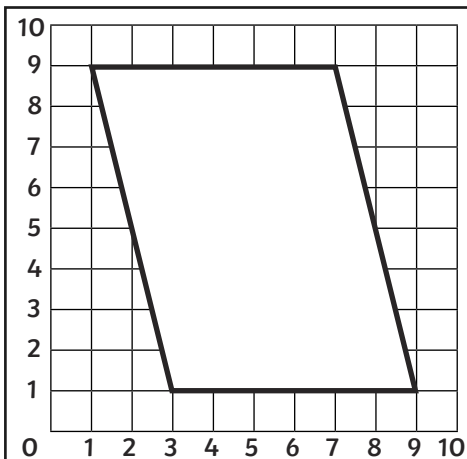
2. (3,2)(5,9)(7,2)

Isosceles
Polygon = **Triangle**



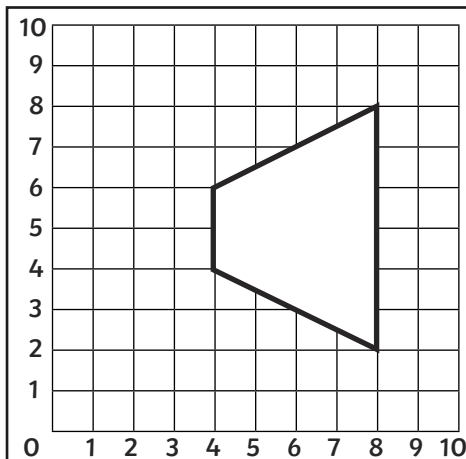
3. (0,3)(4,6)(10,0)

Scalene
Polygon = **Triangle**



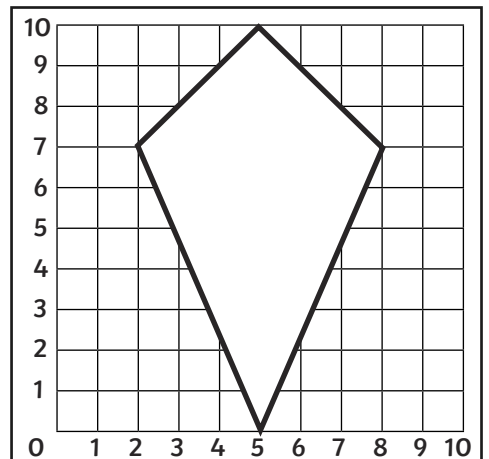
4. (1,9)(7,9)(9,1)(3,1)

Polygon = **Parallelogram**



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

Polygon = **Trapezium**



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

Polygon = **Kite**

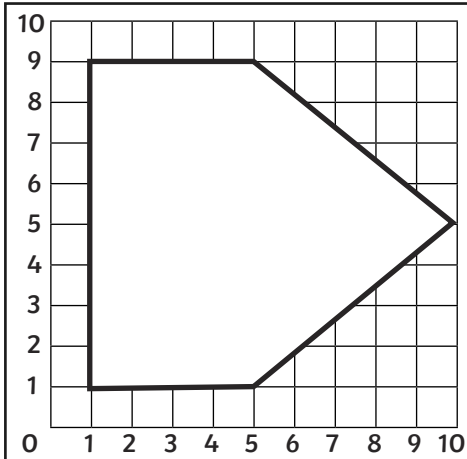


Coordinate Polygons **Answers**

I can plot coordinates to draw polygons.

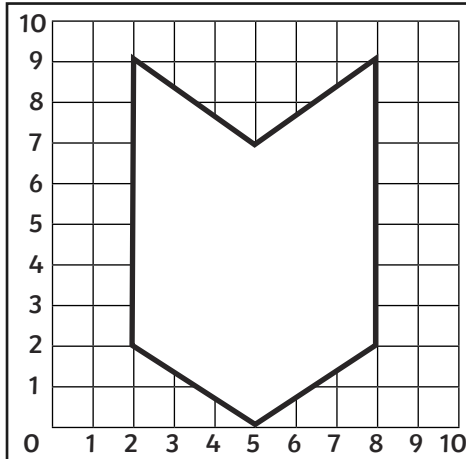


Plot the given coordinates on the grid and join them up to identify the polygon.



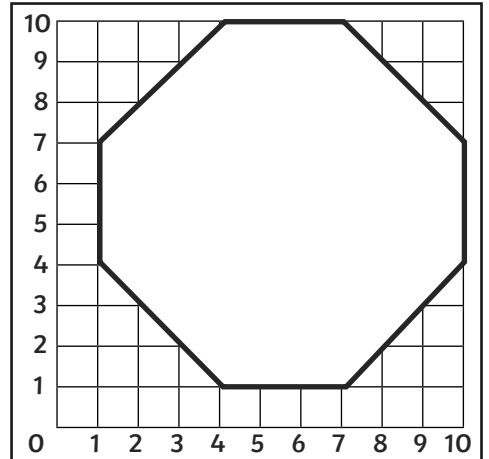
7. (1,9)(1,1)(5,1)
(10,5)(5,9)

Polygon = *Irregular*
Pentagon



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

Polygon = *Irregular*
Hexagon



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

Polygon = *Irregular*
Octagon



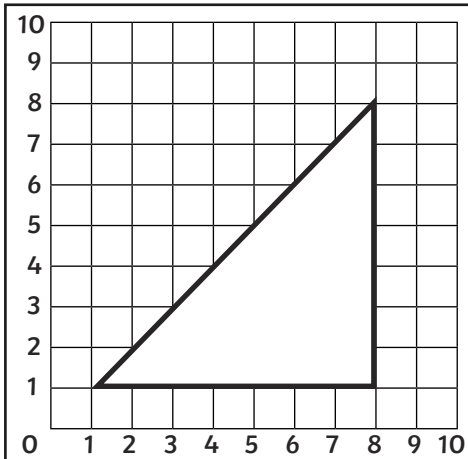
Coordinate Polygons Answers

I can plot coordinates to draw polygons.



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

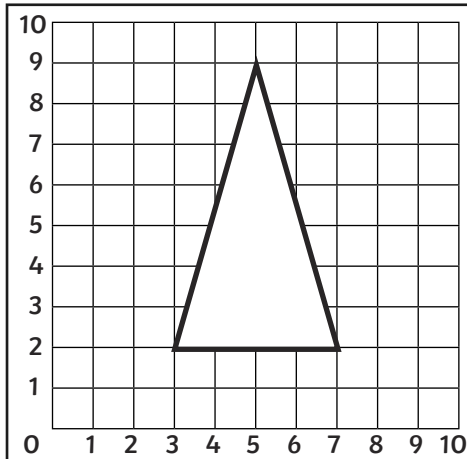
Extra Challenge: Use a ruler to measure the sides of each polygon to the nearest half cm and calculate the perimeter of each polygon.



1. (1,1)(8,8)(8,1)

Polygon = **Right-angled Triangle**

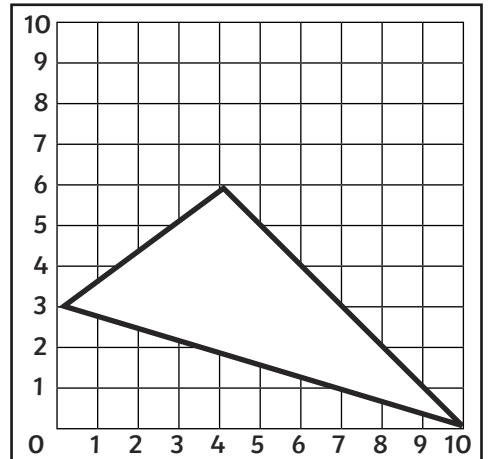
Perimeter = **12.5 cm**



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

Polygon = **Isosceles Triangle**

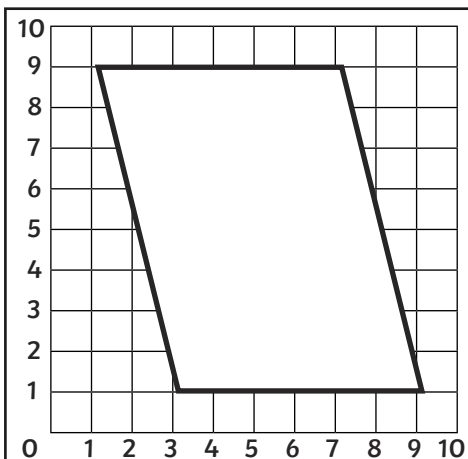
Perimeter = **10 cm**



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

Polygon = **Scalene Triangle**

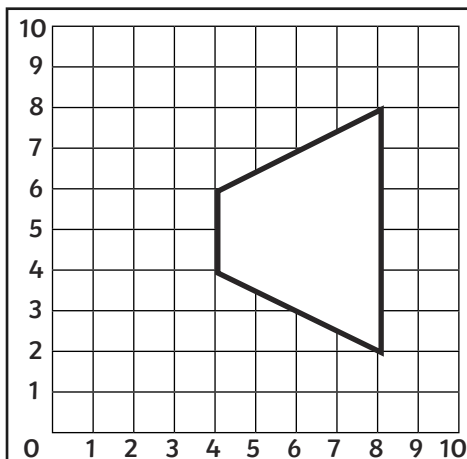
Perimeter = **12.5 cm**



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

Polygon = **Parallelogram**

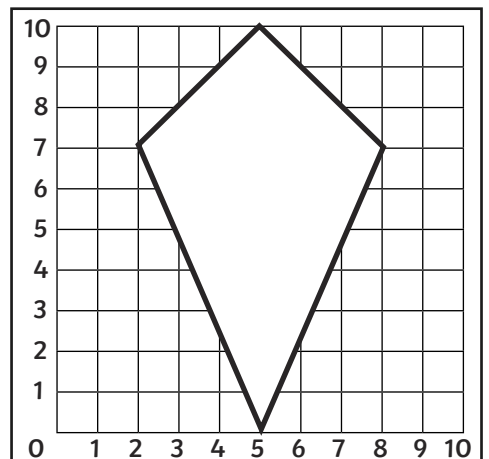
Perimeter = **15 cm**



5. (8,8)(8,2)(4,3)(4,6)

Polygon = **Trapezium**

Perimeter = **9 cm**



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

Polygon = **Kite**

Perimeter = **14 cm**



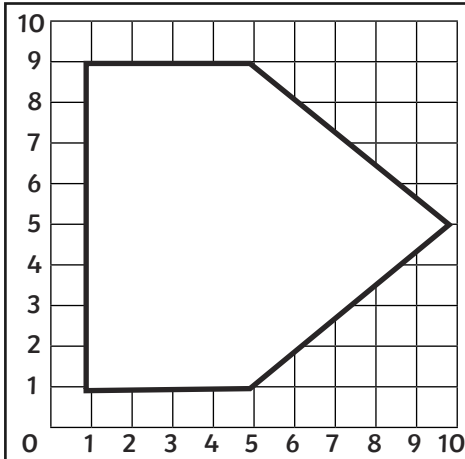
Coordinate Polygons **Answers**

I can plot coordinates to draw polygons.



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

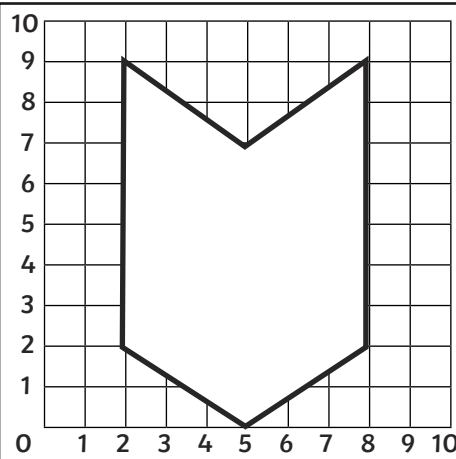
Extra Challenge: Use a ruler to measure the sides of each polygon to the nearest half cm and calculate the perimeter of each polygon.



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

Polygon = **Irregular
Pentagon**

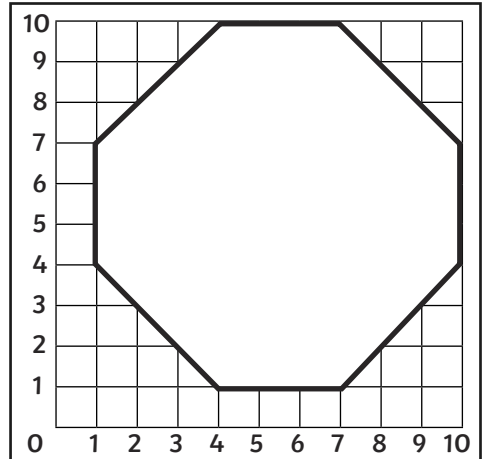
Perimeter = **15 cm**



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

Polygon = **Irregular
Hexagon**

Perimeter = **15 cm**



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

Polygon = **Irregular
Octagon**

Perimeter = **16 cm**

- 1) Points drawn at $(5,2)$ and $(5,5)$.
- 2) Points drawn at $(1,5)$ and $(5,3)$.
- 3) Multiple answers possible, including $(3,4)$ and $(5,2)$ or $(1,1)$ and $(3,5)$.
- 4) Multiple answers possible, including $(3,4)$ and $(5,4)$.



An explanation and examples that show that the five points could make a pentagon, but that they could be in a straight line to create a line in a triangle or quadrilateral.

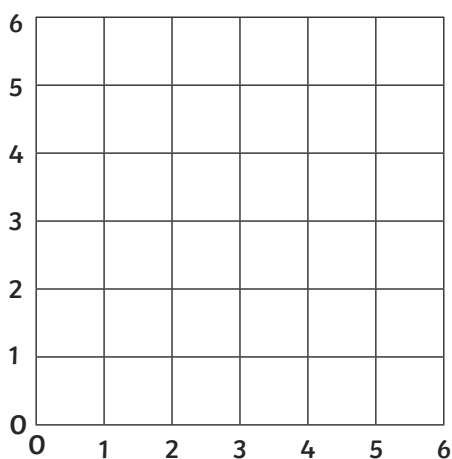


Multiple answers are possible – make sure children have drawn different triangles/quadrilaterals, and that they have given the correct coordinates for each shape.



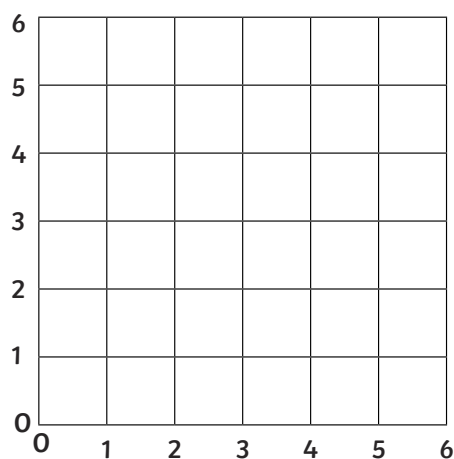


- 1) Plot these coordinates onto the grid. Plot two more points to make a square.



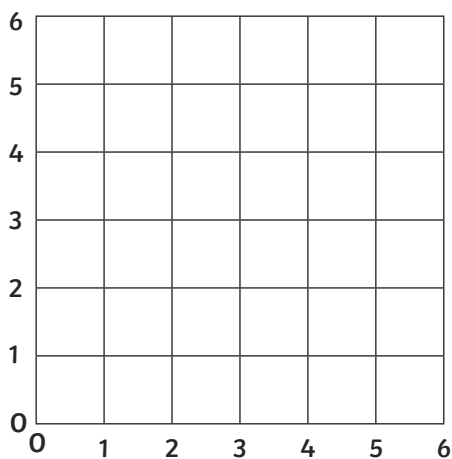
$(2,2), (2,5)$

- 2) Plot these coordinates onto the grid. Plot two more points to make a rectangle.



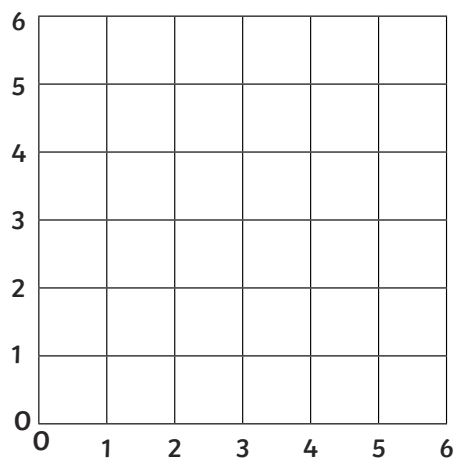
$(1,3), (5,5)$

- 3) Plot these coordinates onto the grid. Plot two more points to make a parallelogram.



$(3,1), (5,5)$

- 4) Plot these coordinates onto the grid. Plot two more points to make a kite.



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

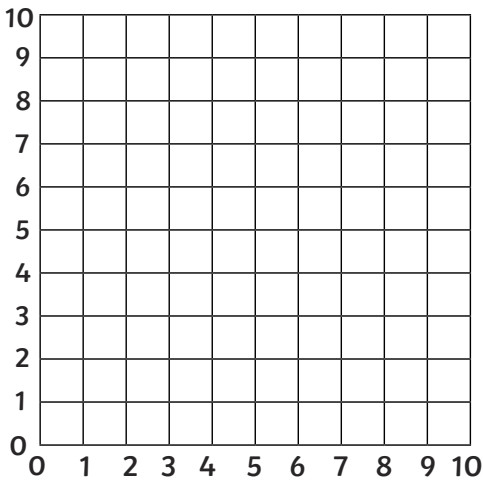
Isaac says:



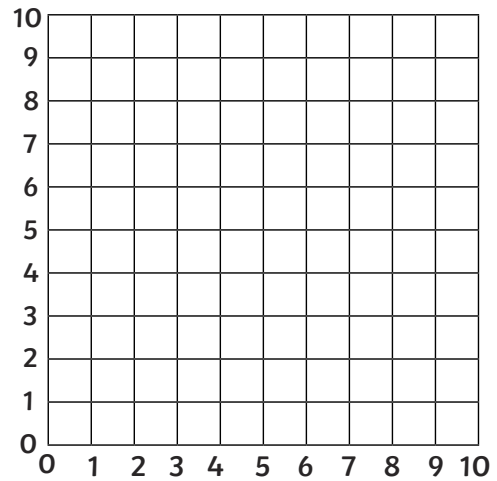
If I plot five points on a grid, I will always make a pentagon.



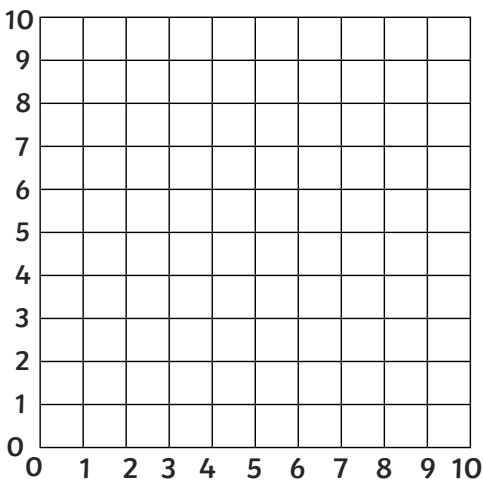
Do you agree with this statement? Use different colour pencils to draw on the grid below to explain your reasoning. How many ways of plotting five coordinates can you find? Label all the coordinates that you plot.



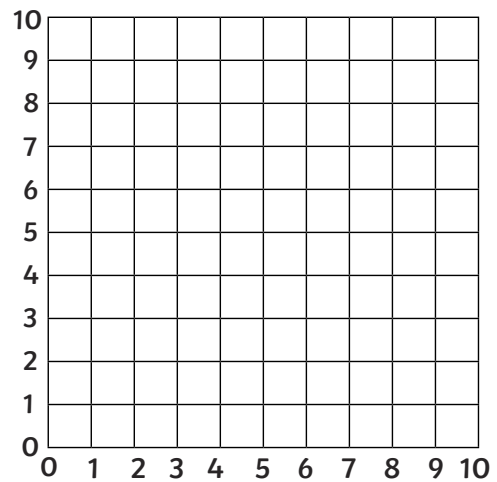
Coordinates:



Coordinates:



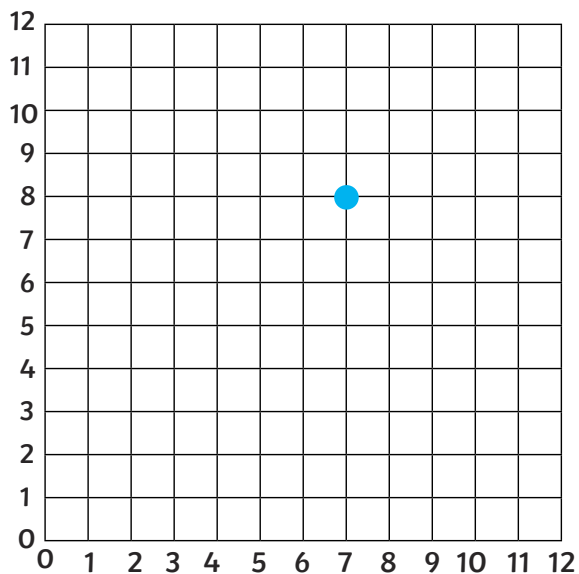
Coordinates:



Coordinates:



The coordinate point shown on this grid is a shared vertex of three types of triangles. Can you plot the missing vertices and draw lines to construct the three different triangles? Write the coordinates of each triangle. Can you find at least three different ways to solve this problem?

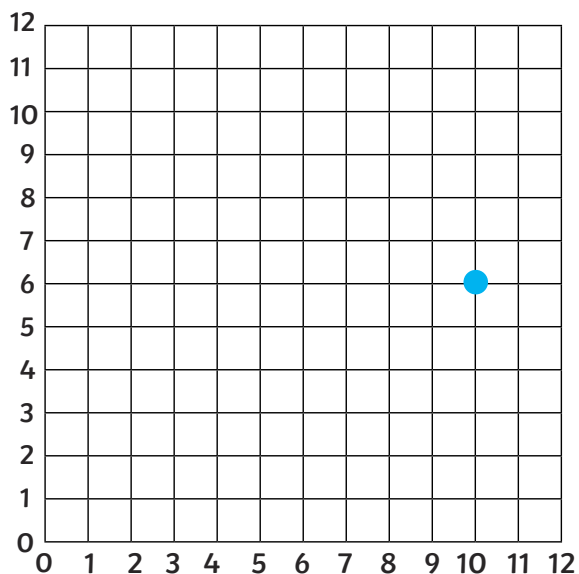


Triangle 1 _____

Triangle 2 _____

Triangle 3 _____

The coordinate point shown on this grid is a shared vertex of three different types of quadrilaterals. Can you plot the missing vertices and draw lines to construct the three different quadrilaterals? Write the coordinates of each quadrilateral. Can you find at least three different ways to solve this problem?

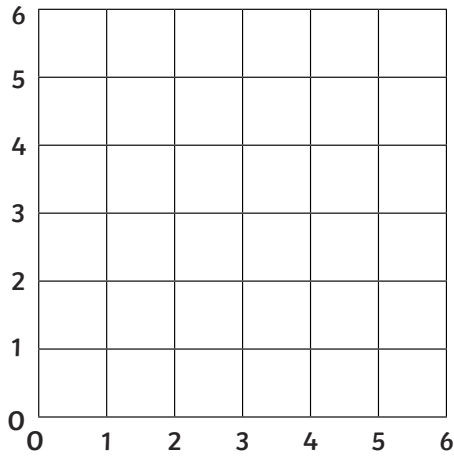


Quadrilateral 1 _____

Quadrilateral 2 _____

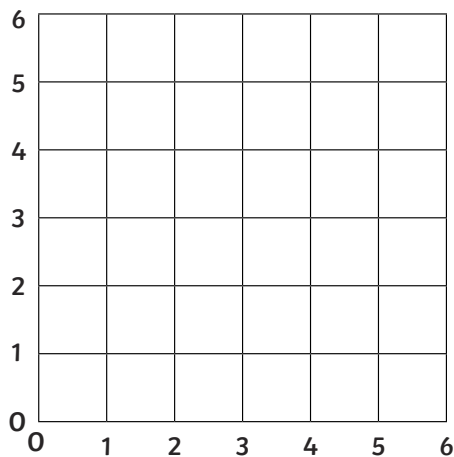
Quadrilateral 3 _____

- 1) Plot these coordinates onto the grid.
Plot two more points to make a square.



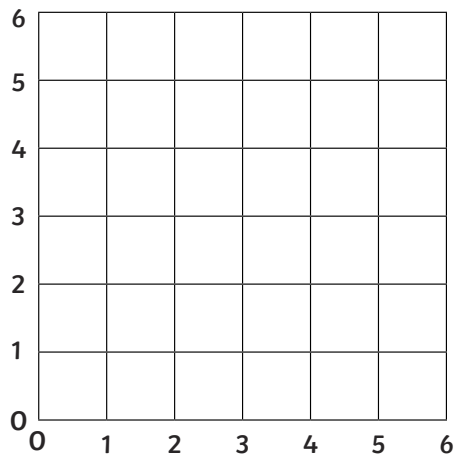
(2,2), (2,5)

- 2) Plot these coordinates onto the grid. Plot two more points to make a rectangle.



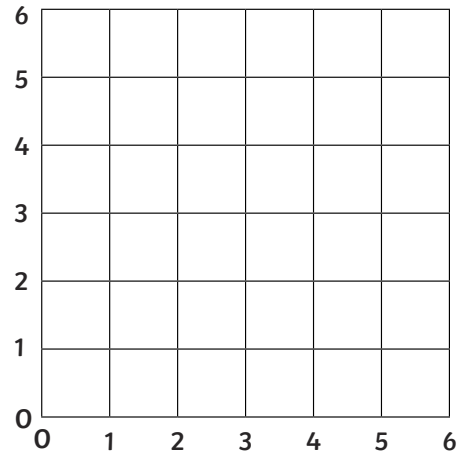
(1,3), (5,5)

- 3) Plot these coordinates onto the grid. Plot two more points to make a parallelogram.



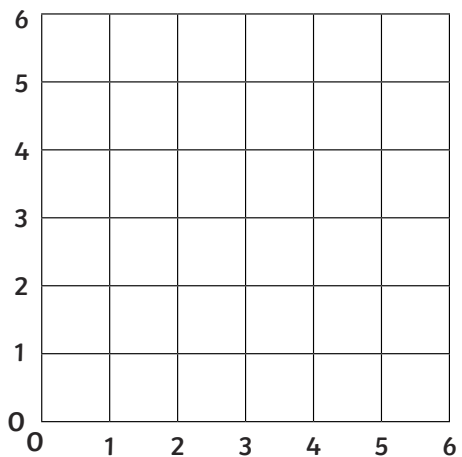
(3,1), (5,5)

- 1) Plot these coordinates onto the grid.
Plot two more points to make a square.



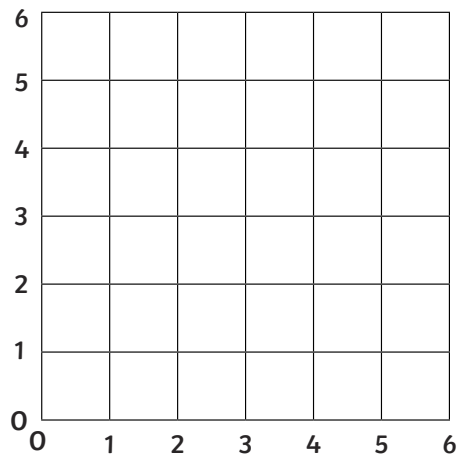
(2,2), (2,5)

- 2) Plot these coordinates onto the grid. Plot two more points to make a parallelogram.



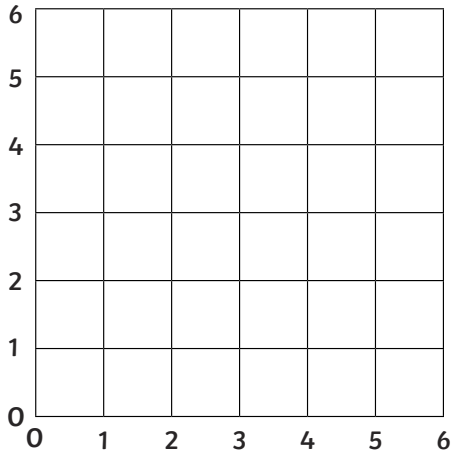
(1,3), (5,5)

- 3) Plot these coordinates onto the grid. Plot two more points to make a rectangle.



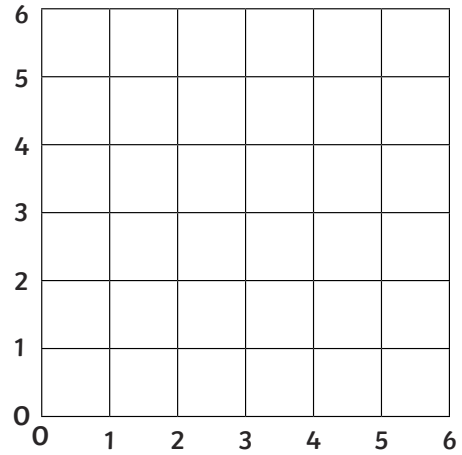
(3,1), (5,5)

4) Plot these coordinates onto the grid.
Plot two more points to make a kite.



(4,5), (4,2)

4) Plot these coordinates onto the grid.
Plot two more points to make a kite.



(4,5), (4,2)

Isaac says:

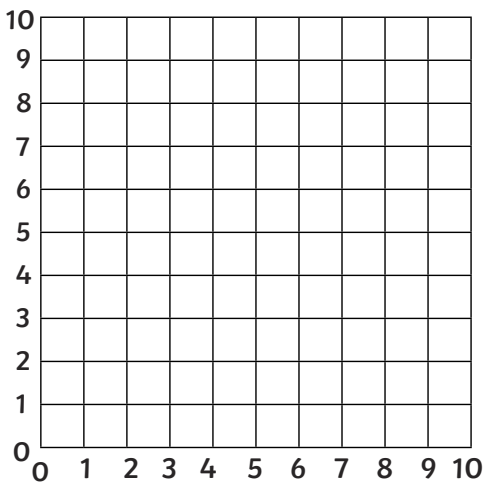


If I plot five points on a grid, I will always make a pentagon.



Do you agree with this statement?

Draw a coordinate grid on squared paper and investigate different ways of plotting five coordinates. Label all the coordinates that you plot.



Coordinates:

Isaac says:

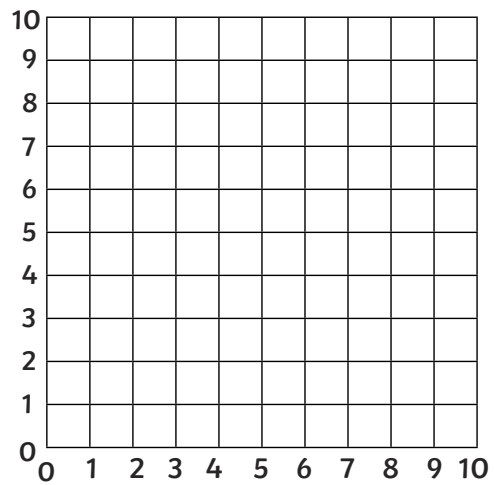


If I plot five points on a grid, I will always make a pentagon.



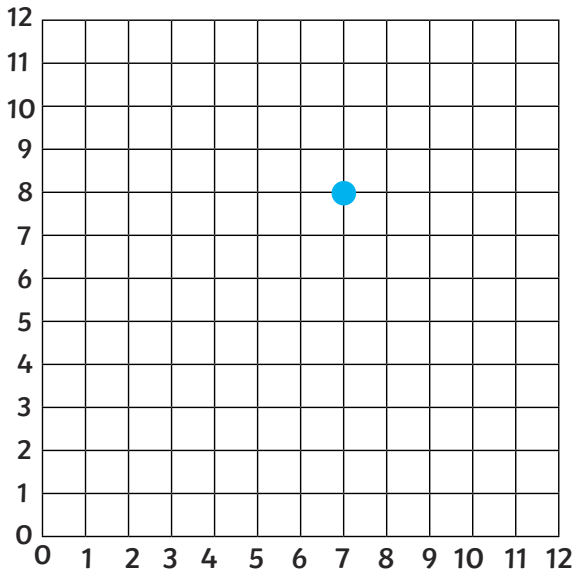
Do you agree with this statement?

Draw a coordinate grid on squared paper and investigate different ways of plotting five coordinates. Label all the coordinates that you plot.

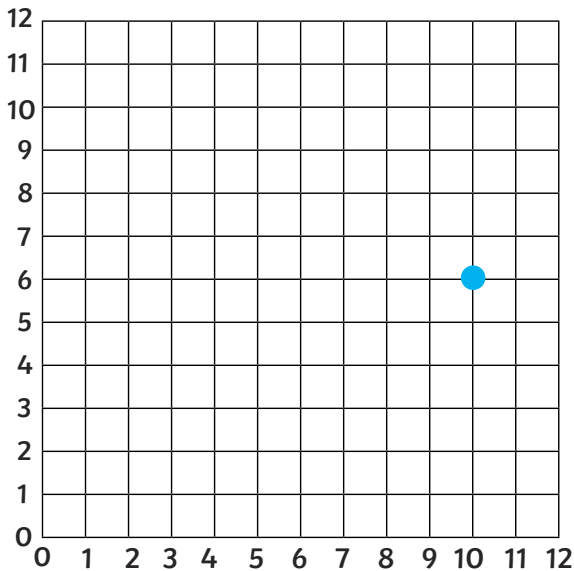


Coordinates:

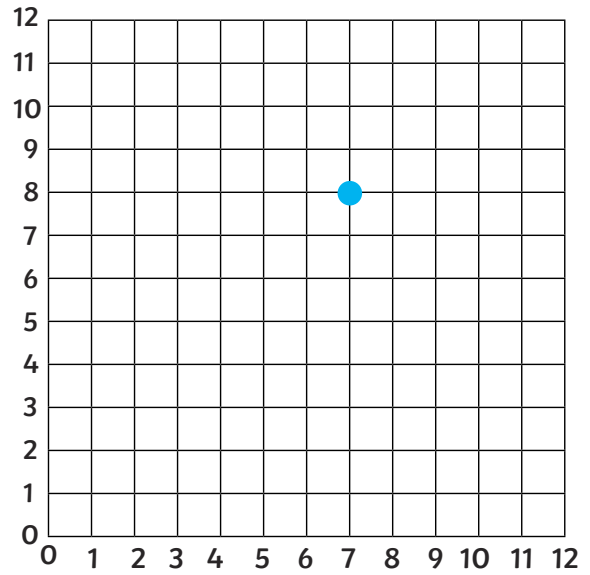
The coordinate point shown on this grid is a shared vertex of three types of triangles. Can you plot the missing vertices and draw lines to construct the three different triangles? Write the coordinates of each triangle. Can you find at least three different ways to solve this problem?



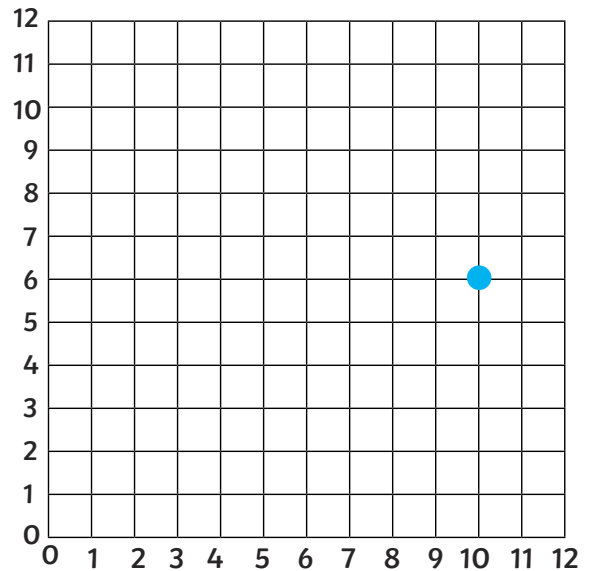
The coordinate point shown on this grid is a shared vertex of three different types of quadrilaterals. Can you plot the missing vertices and draw lines to construct the three different quadrilaterals? Write the coordinates of each quadrilateral. Can you find at least three different ways to solve this problem?



The coordinate point shown on this grid is a shared vertex of three types of triangles. Can you plot the missing vertices and draw lines to construct the three different triangles? Write the coordinates of each triangle. Can you find at least three different ways to solve this problem?

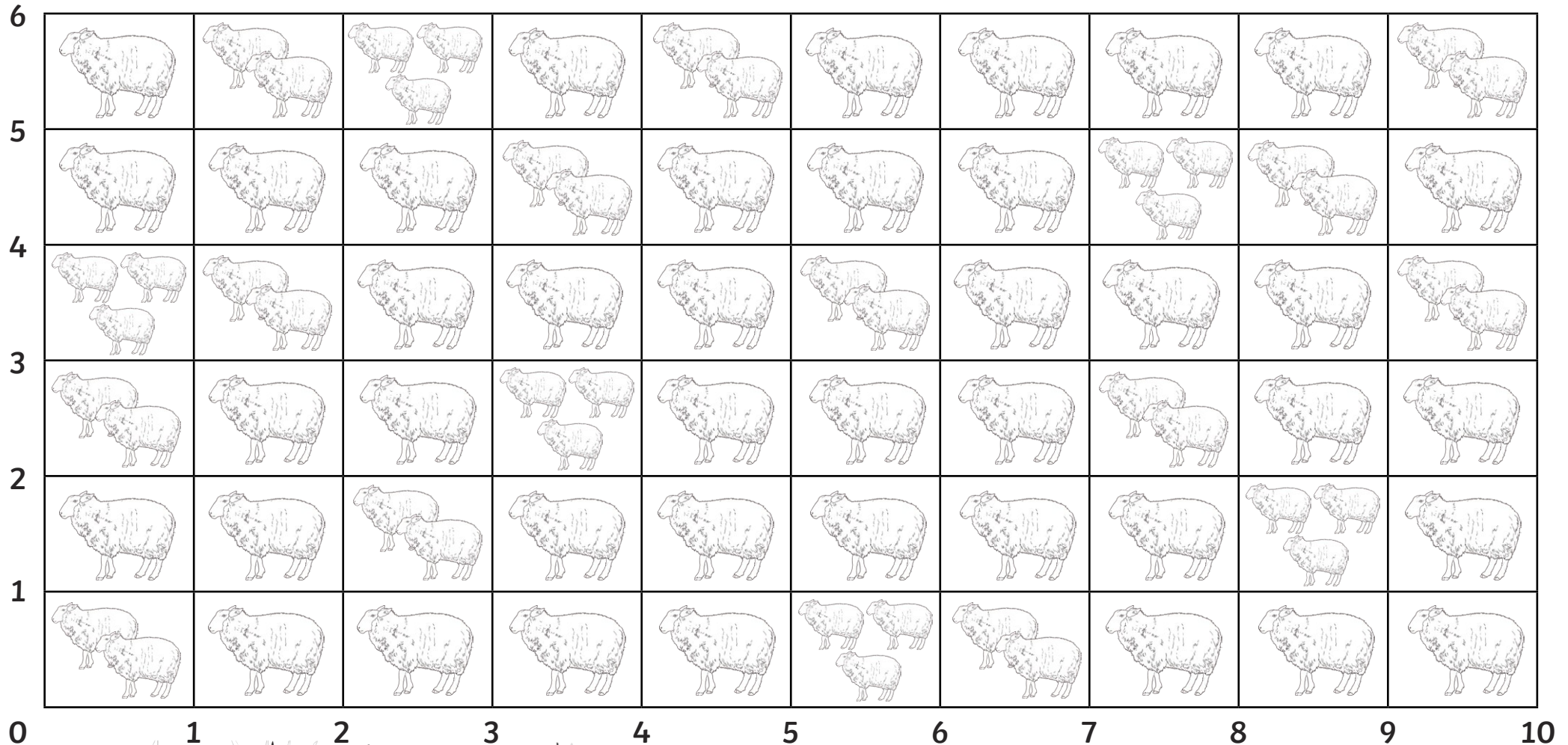


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Sheepdog Championship Coordinate Game

Cut out and shuffle the game cards. On your turn choose a card and plot the coordinates on the game board. You have successfully rounded up all the sheep within the shape made by the points you have plotted. The player who rounds up the most sheep wins!

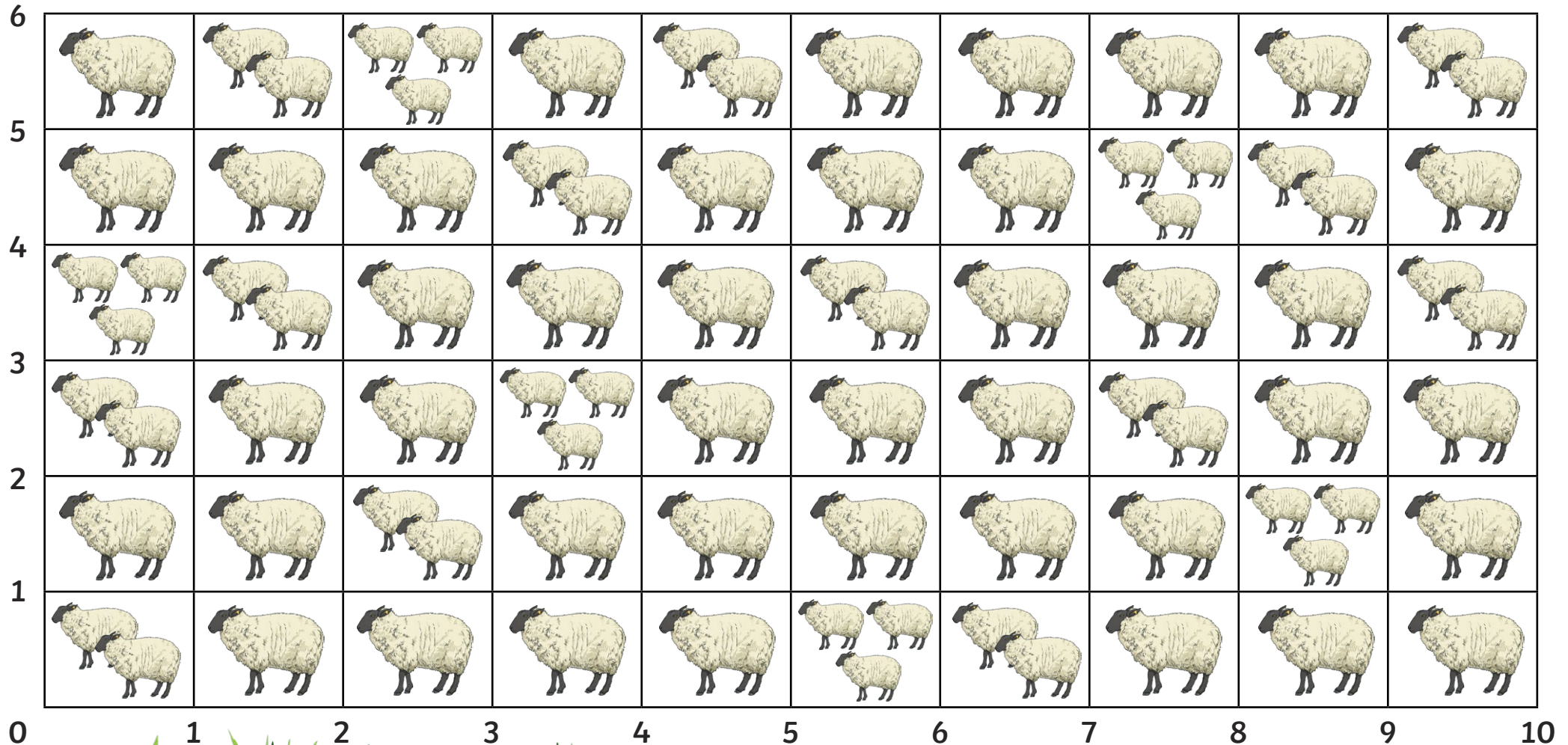


Sheepdog Championship Coordinate Game















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

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Sheepdog Championship Coordinate Game

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(4,1) (5,3) (6,1) (6,3) (6,2) (6,4) (5,2) (4,4)	(5,0) (6,2) (8,0) (6,1) (8,2) (5,1)	(5,2) (6,4) (8,2) (6,3) (8,4) (5,3)	(6,4) (9,6) (8,4) (7,6) (8,5) (7,5) (9,5) (6,5)	(8,3) (9,6) (10,3) (9,5) (10,6) (8,5)	(8,0) (9,0) (9,3) (8,3)	(9,0) (10,0) (10,3) (9,3)
						

Position and Direction | Coordinate Polygons

I can plot coordinates to draw polygons.		
I can label the x and y-axis.		
I know that a coordinate is represented by two numbers in brackets, separated by a comma.		
I can read a coordinate correctly by going along and then up.		

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