Diving into Mastery

The First Quadrant

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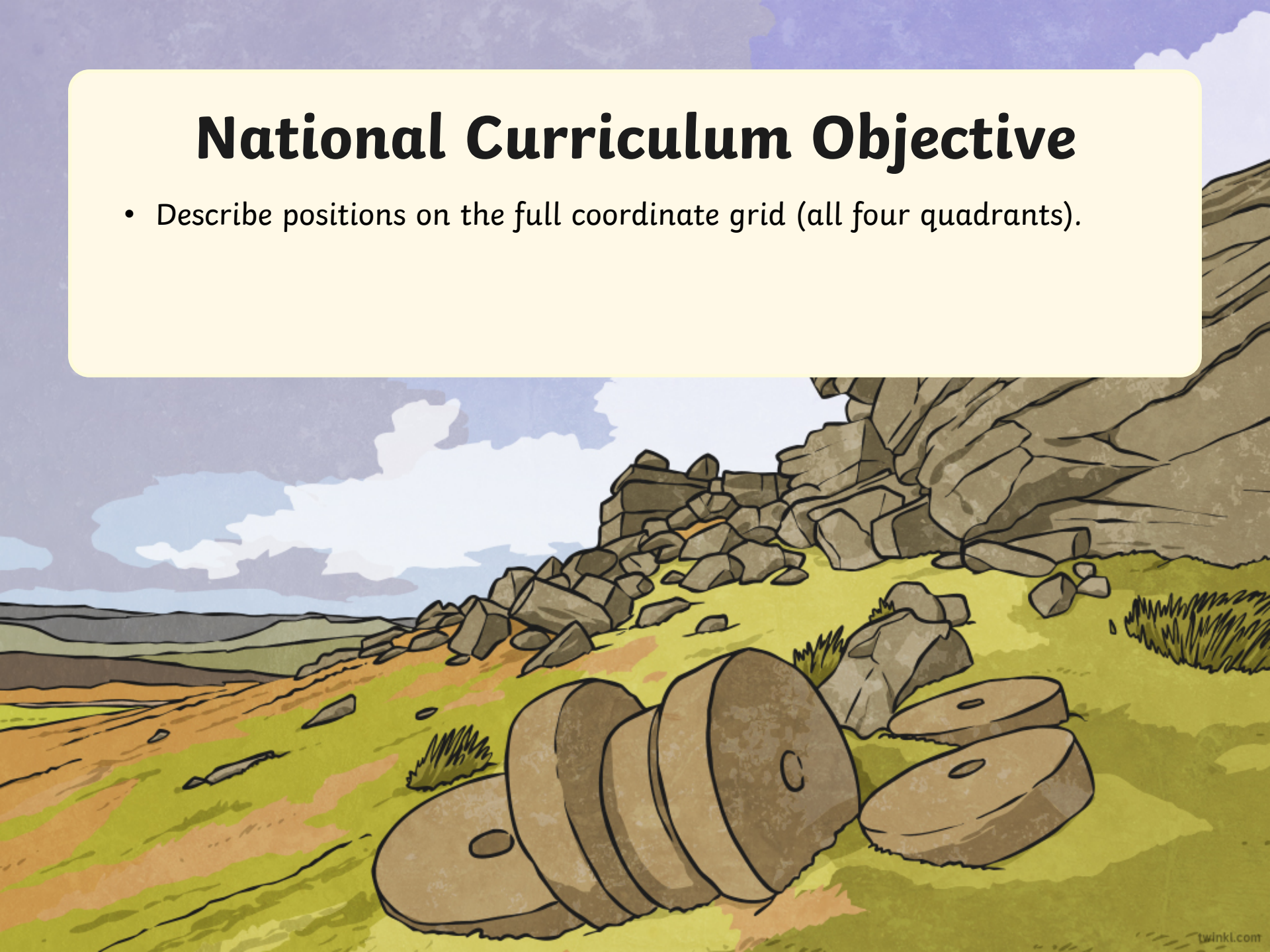
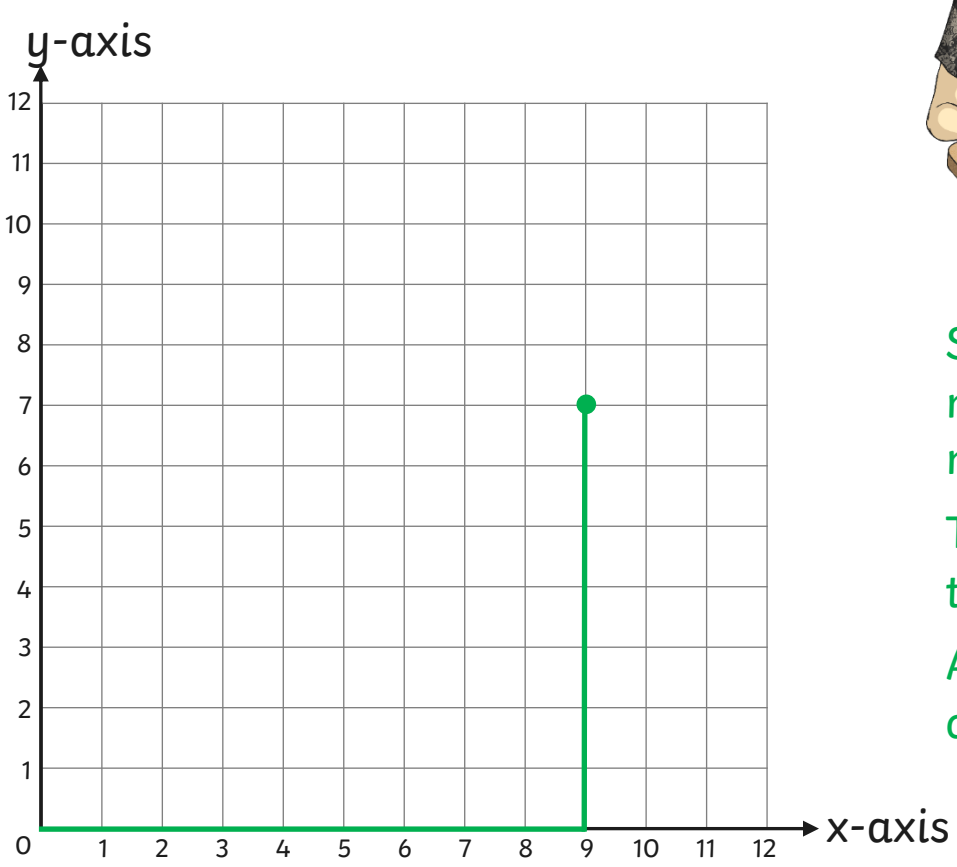
National Curriculum Objective

- Describe positions on the full coordinate grid (all four quadrants).



The First Quadrant | **Diving**

Working with your learning partner, write an explanation of how to plot the coordinate (9,7) on a coordinate grid.



Starting at the origin (0,0), read along the x-axis to the number 9.

Then read up the y-axis to the number 7.

At this point, mark the coordinate.

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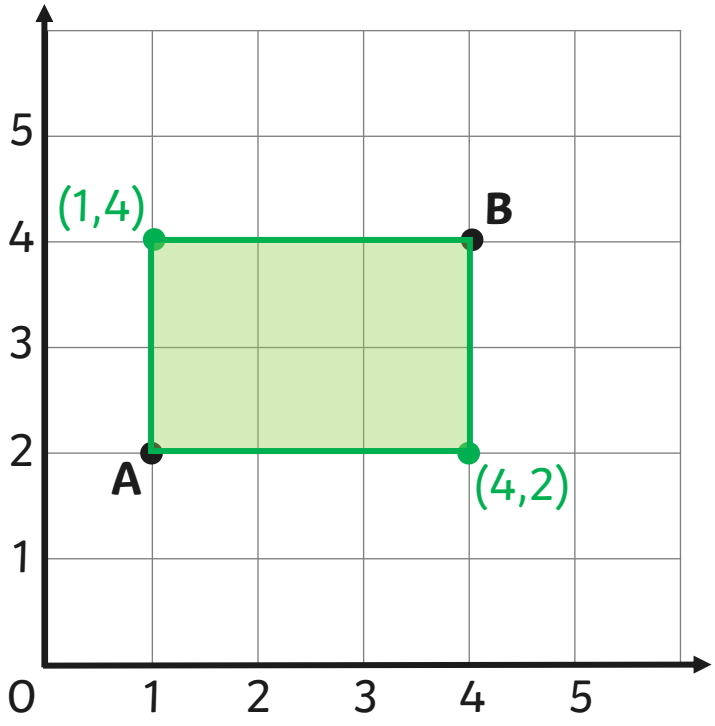
The First Quadrant | **Diving**

Jenni has plotted two vertices of a rectangle.
What are the coordinates of vertices A and B?

Write down the coordinates of the missing two vertices.



Vertex **A** (1,2)
Vertex **B** (4,4)

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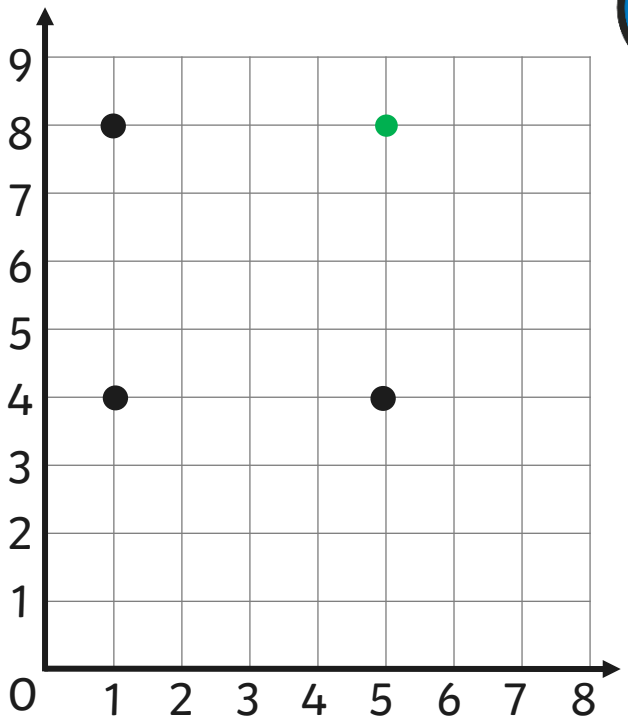
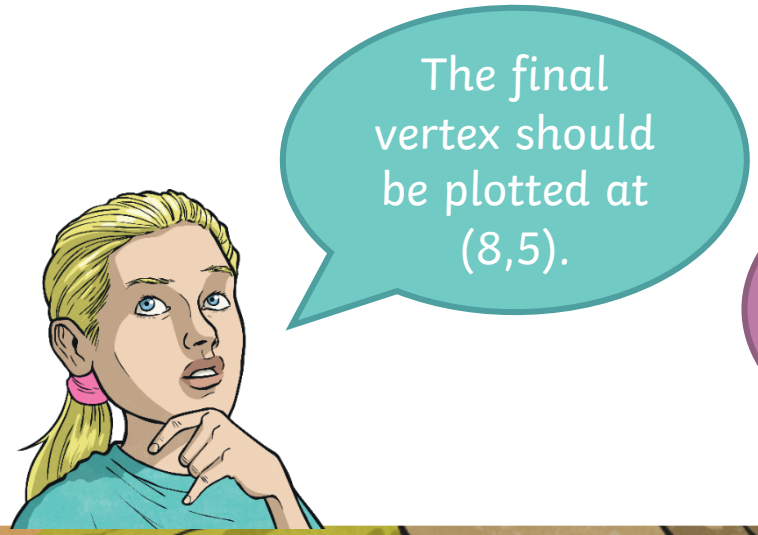
The First Quadrant | Deeper

Jenni and Paul are plotting the vertices of a square.

Who do you agree with and why? What mistakes have been made?



Paul is correct. Jenni has given the y coordinate first. She should have given the x coordinate and then the y coordinate.



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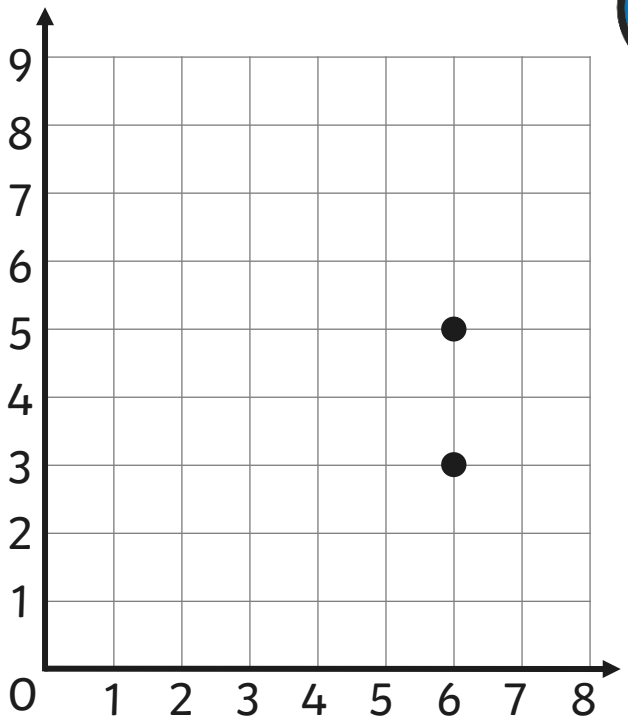
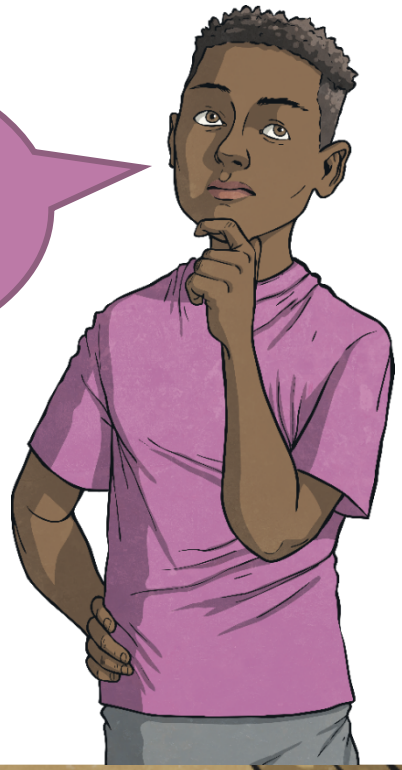
The First Quadrant **Deeper**

Here are two vertices of a rectangle.

There are many possible answers. For example, (5,5) and (5,3) would make a rectangle. They could not be (5,6) and (5,2) as this would make a trapezium.





What could the coordinates of the other two vertices be?

What coordinates could they not be?

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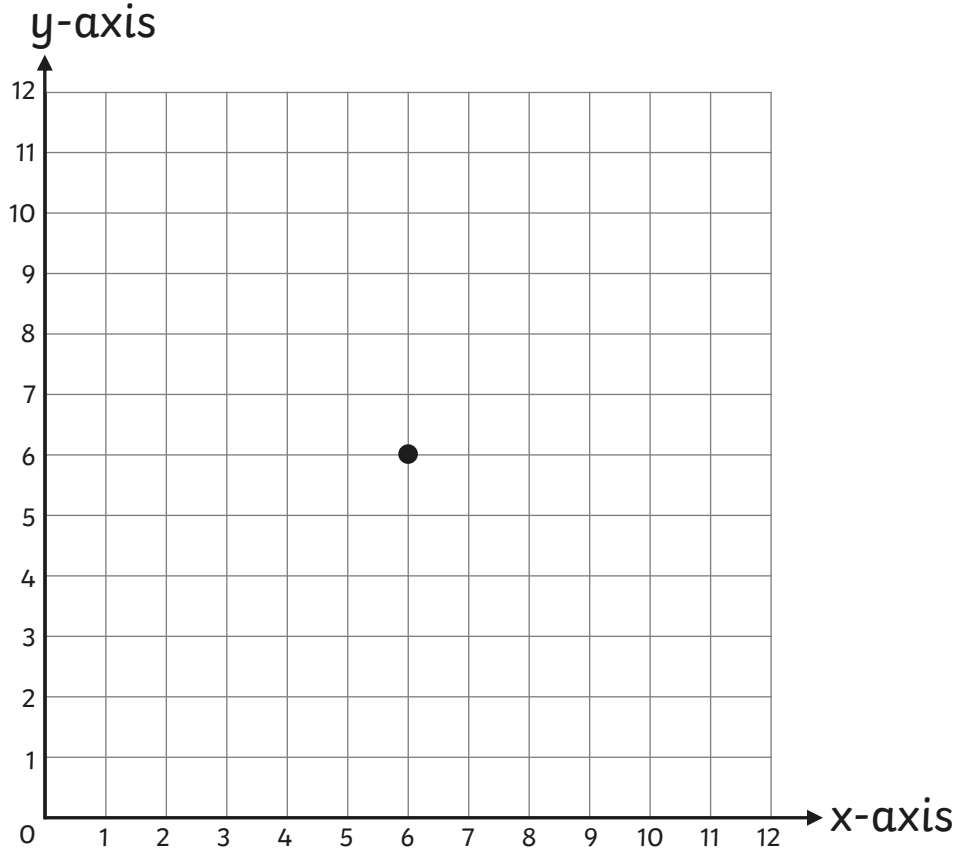
The First Quadrant

Deepest



Here is one vertex of a rectangle.

Find all the possible rectangles that can be drawn using this vertex.

Write the coordinates of the missing vertices of each rectangle.

There are lots of possible answers. Compare your findings with a friend.

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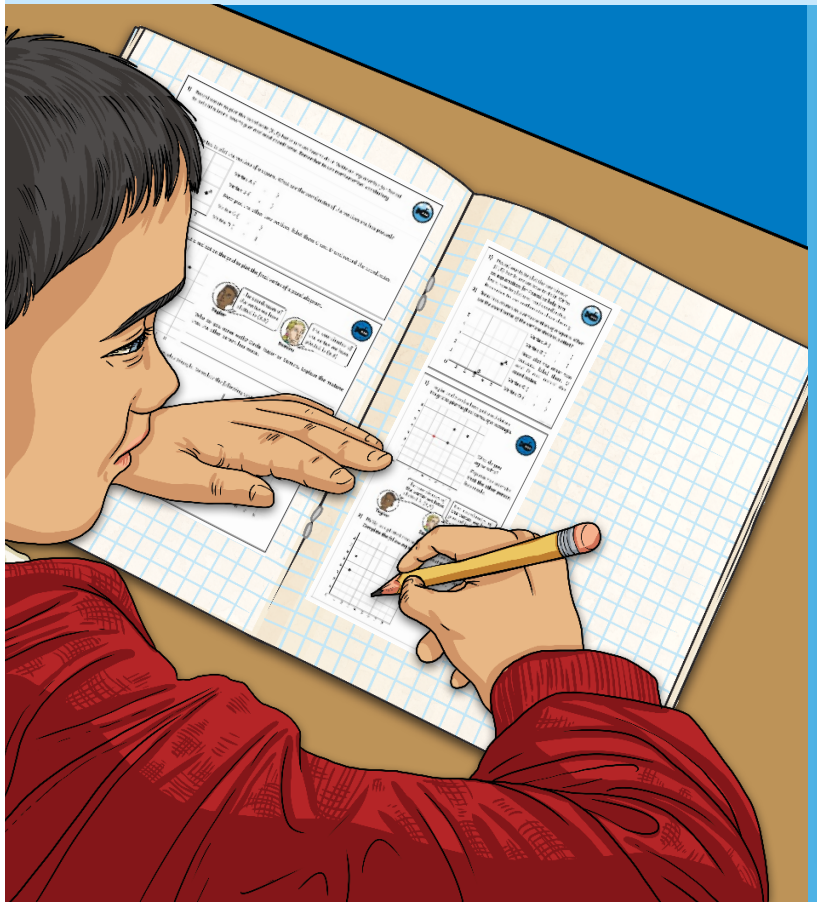
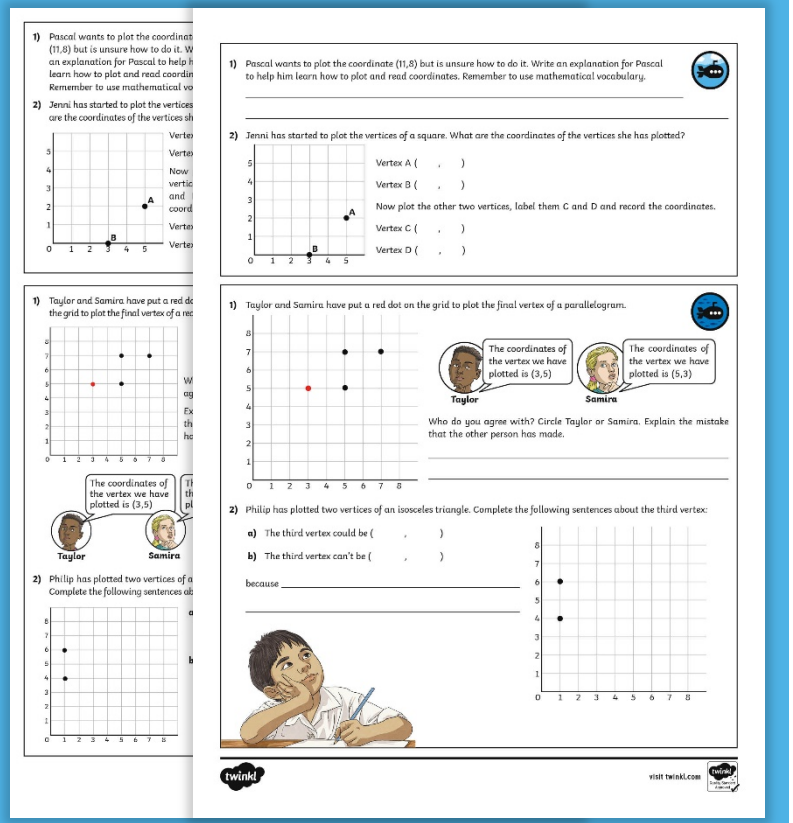
The First Quadrant

Dive in by completing your own activity!





1) Pascal wants to plot the coordinate (11,8) but is unsure how to do it. Write an explanation for Pascal to help him learn how to plot and read coordinates. Remember to use mathematical vocabulary.

2) Jenni has started to plot the vertices of a square. What are the coordinates of the vertices she has plotted?

Vertex A (,)

Vertex B (,)

Now plot the other two vertices, label them C and D and record the coordinates.

Vertex C (,)

Vertex D (,)

1) Taylor and Samira have put a red dot on the grid to plot the final vertex of a parallelogram.

Taylor: The coordinates of the vertex we have plotted is (3,5)

Samira: The coordinates of the vertex we have plotted is (5,3)

Who do you agree with? Circle Taylor or Samira. Explain the mistake that the other person has made.

2) Philip has plotted two vertices of an isosceles triangle. Complete the following sentences about the third vertex:

a) The third vertex could be (,)

b) The third vertex can't be (,)

because

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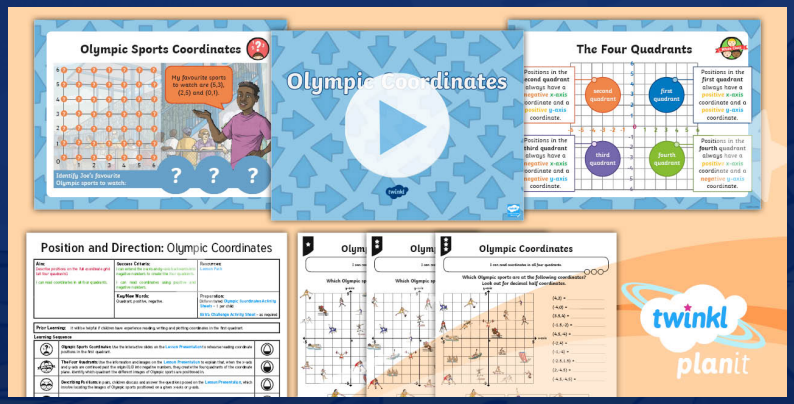
Need Planning to Complement this Resource?

National Curriculum Aim

Describe positions on the full coordinate grid (all four quadrants).

For more planning resources to support this aim, [click here](#).



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