



# Was Maths Invented or Discovered?

Not only an age-old philosophical question for P4C and Maths, but a classroom match-report to give you ideas for facilitating it yourself.



Show the class this image:

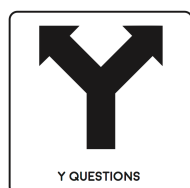
<http://mayaarchaeologist.co.uk/index.php/2016/12/28/maya-numbers/> and ask: "What could this be?" and get them sharing ideas in pairs.

It's actually the Mayan system of counting (see a more polished version [here](#)). The class were studying Mayans as a topic, and were moving on to Mayan numerals that very day.

The Mayan system was not influenced by, nor did it influence, other systems of mathematics, which led me to think about the classic question: Was Mathematics invented, or discovered?

Some questions can have pupils buzzing with ideas from the first second. We've tried this one 'cold' once or twice, but many found it hard to get a foothold.

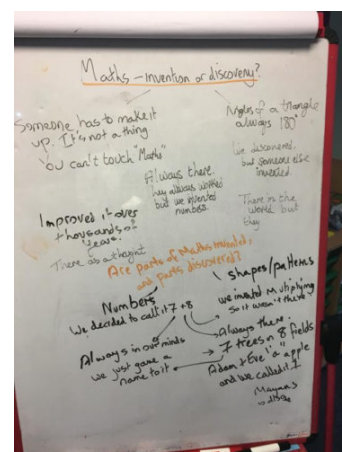
So you might want to get half the class listed 'inventions' – defined as things humans had created, and the other half listed 'discoveries' – things that had been there before us. Establishment of these meanings are important not only to get this foothold, but also reach the crux of the question. It's perfectly reasonable for something to be both an invention and a discovery: for example, a contraption invented by Romans, and found by us. However, we are looking at whether Mathematics existed before the first human. The relationship between the concepts of invention/discovery could easily have its own spin-off enquiry!



There's lots to say on this question, and several new Y-Questions will inevitably arise as pupils grapple with the main one. To keep track, consider writing what is said on the board (like on the right).



This is an example of the *Scribe, Don't Script* principle explored in our Philosophy Circles training. Whilst the dialogue may be hard to follow when viewed isolation, in real time it provides pupils with a record of what's been said, so they can more easily connect their thoughts to what's already been proposed.



After the opening round of ideas ("you can't touch Maths!" / "angles in a triangle always add up to 180 degrees") one pupil suggested that Maths was always there, but we had invented numbers to describe it.  $7 \times 8 = 56$  was true without us, but we decided to give it the labels of 7, 8 and 56.

Taking another of our principles – Use Their Questions – we zoned in on this statement to test for accuracy. Could  $7 \times 8$  be 56 without us? If so, how?

## NEXT STEPS

You might find the class beginning to explore the concept and nature of Numbers, and, so you could use the 2 Square stimulus from the excellent book "[The Philosophy Shop](#)" by Peter Worley of [The Philosophy Foundation](#).

2 2  
2 2

How many numbers are on the board? Peter explains the thinking behind it in his own match-report [here](#).

You

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