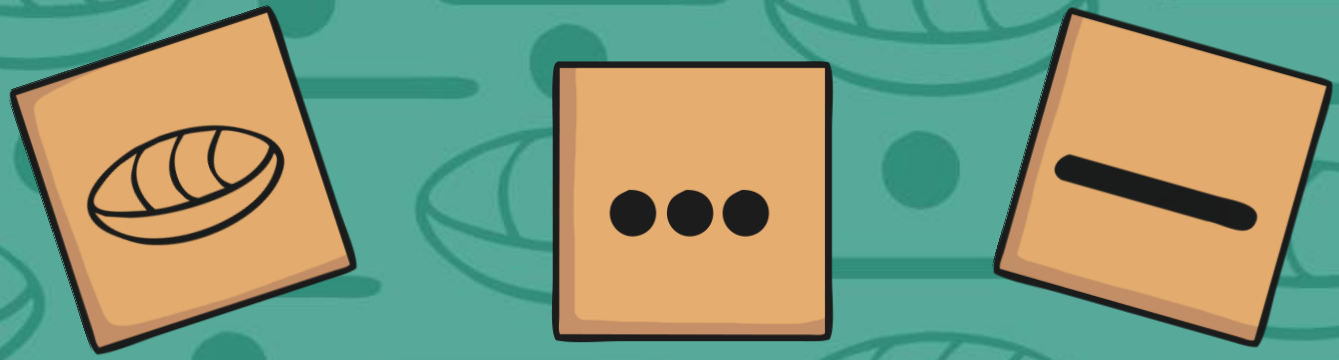
Maya Number System

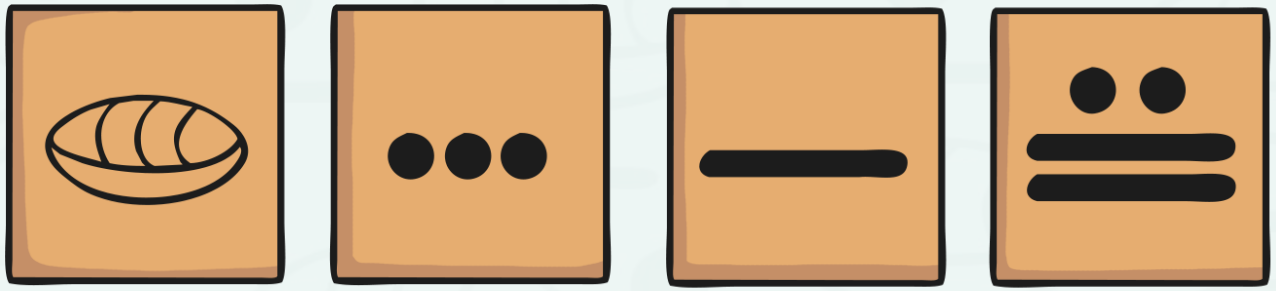


The Maya and Numbers

The Maya had a good understanding of numbers and they developed a complex number and counting system which was advanced for their time.

They were one of only two cultures in the world to develop the concept of zero and this allowed them to develop a place value system where a zero could act as a place holder in large numbers. This enabled the Maya people to distinguish between numbers like 23 and 203, where the placement of the zero determines the value of the digit 2 as 200. This is a very important concept which many civilisations did not understand until much later than the Maya.

The Maya people used symbols to represent their numbers. Let's have a look at how it worked.

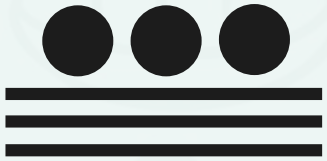


Number Symbols

The Maya people used just three symbols in their number system. These are thought to represent items that the Maya people might have first used to count with such as pebbles, sticks and shells.

Look at the following Maya numbers. Can you work out what numbers the symbols represent and how the system works?

 = 7

 = 18

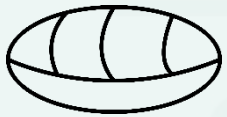
 = 11

 = 0

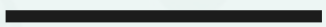
Shells, Sticks and Pebbles

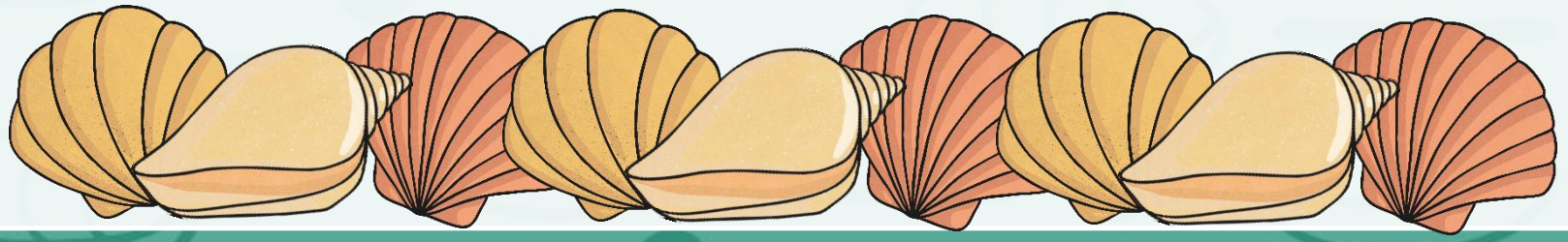
Questions

1. Did you figure it out?
2. What have you learnt about the way the numbers are written?
3. What other Maya numbers can you write?
4. How is the Maya number system similar and different to our own?

 = 0

 = 1

 = 5

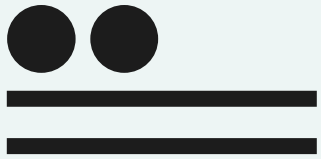


Remember:

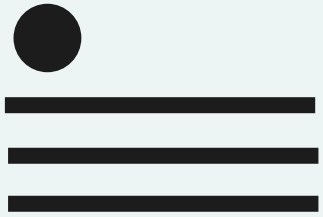
● = 1 ——— = 5

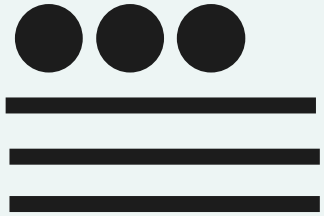
Can you work out what these numbers would be?

 = 7

 = 12

 = 11

 = 16

 = 18

 = 8

Maya Numbers

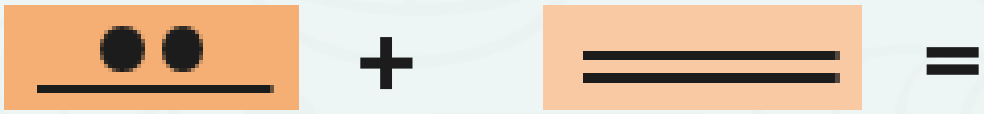
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

11	
12	
13	
14	
15	
16	
17	
18	
19	

Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

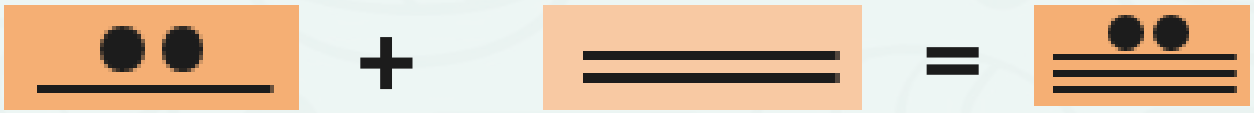
Have a go at recording the answer. Remember to use the Maya symbols!



Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

Have a go at recording the answer. Remember to use the Maya symbols!

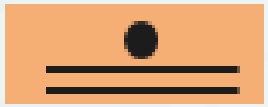


7 + 10 = 17

Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

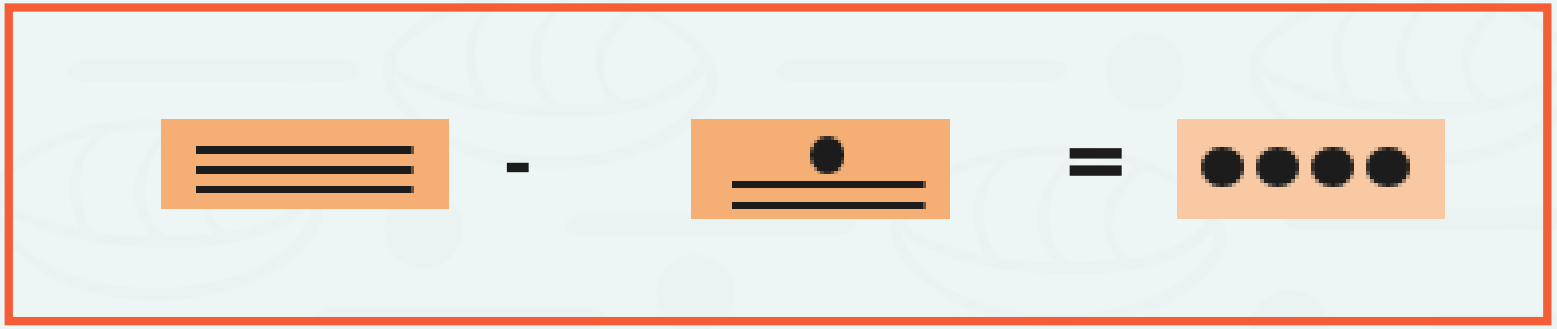
Have a go at recording the answer. Remember to use the Maya symbols!

 -  =

Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

Have a go at recording the answer. Remember to use the Maya symbols!



15 – 11 = 4

Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

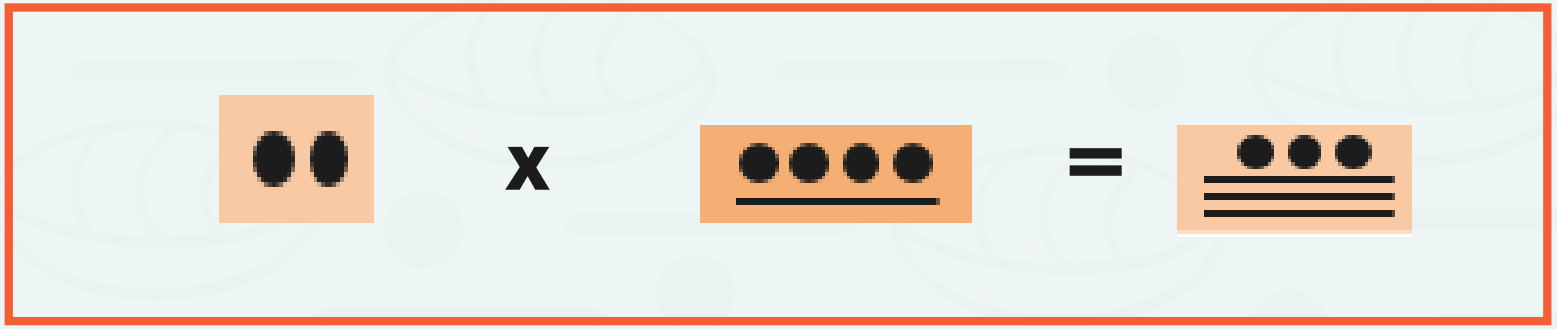
Have a go at recording the answer. Remember to use the Maya symbols!

 x =

Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

Have a go at recording the answer. Remember to use the Maya symbols!

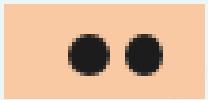


2 x 9 = 18

Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

Have a go at recording the answer. Remember to use the Maya symbols!

 ÷  =

Maya Calculations

Now you know all about Maya numbers are you able to solve this calculation?

Have a go at recording the answer. Remember to use the Maya symbols!

$$10 \div 2 = 5$$