The Art of Mathematics

Introduction:

During the Upper Paleolithic, we can find many works of art on the cave walls. The preferred subject of prehistoric groups were animals, especially herbivores. But along with animals, we can also find symbols, lines, and dots. Some archaeologists think that these symbols could represent a mathematical code.

Instructions:

In this dossier. you will find real examples of prehistoric art with marks or dots. The first part of the activity consists in counting these marks. What do you think they counted?
The second part of the activity consists in cracking the prehistoric code. You will find a prehistoric symbol decoder. Will you be able to crack the code that reveals the prehistoric animal that hides there?

Learning objectives:

Children will learn about the importance of mathematics, not only in modern times but also during prehistory, when it was an important skill for human survival.
Additionally, the children will practice their knowledge of mathematics and logic.

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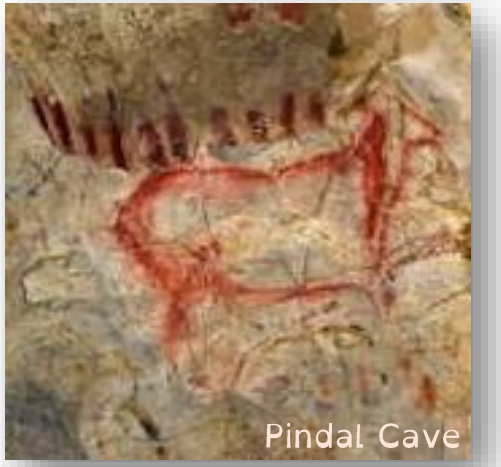
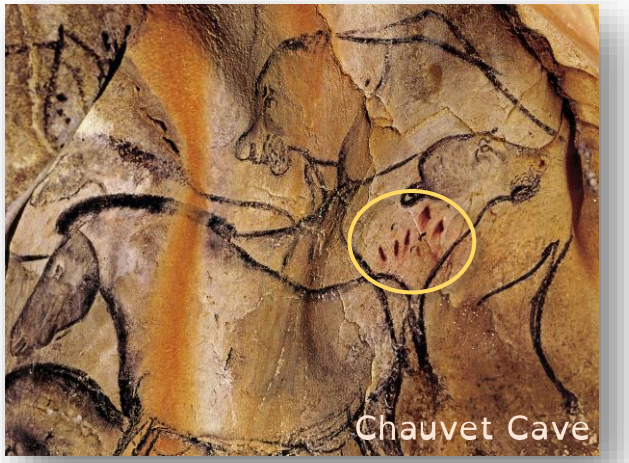
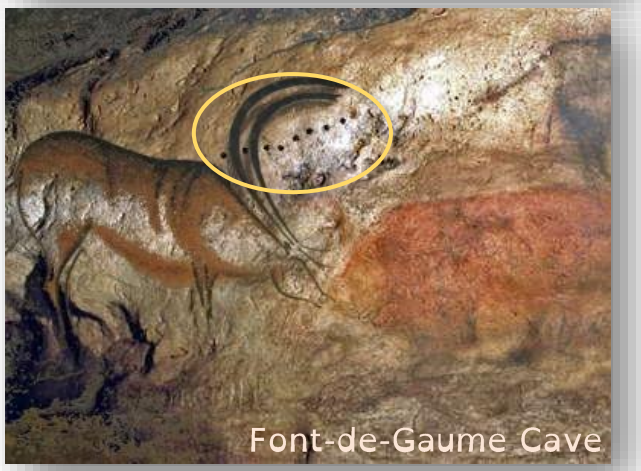
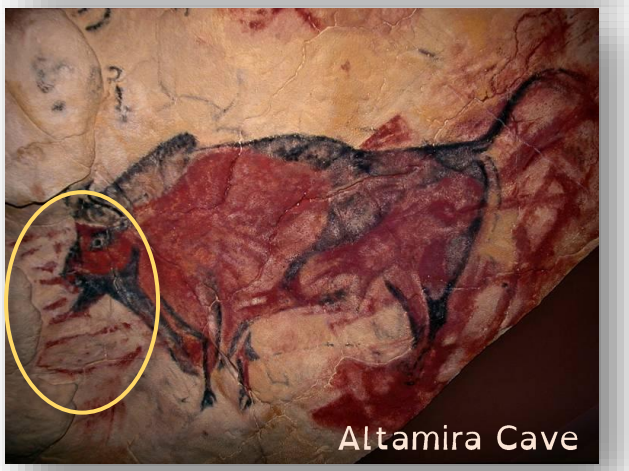
The art of Counting

How many lines or dots can you count on each animal?









What do you think they counted?

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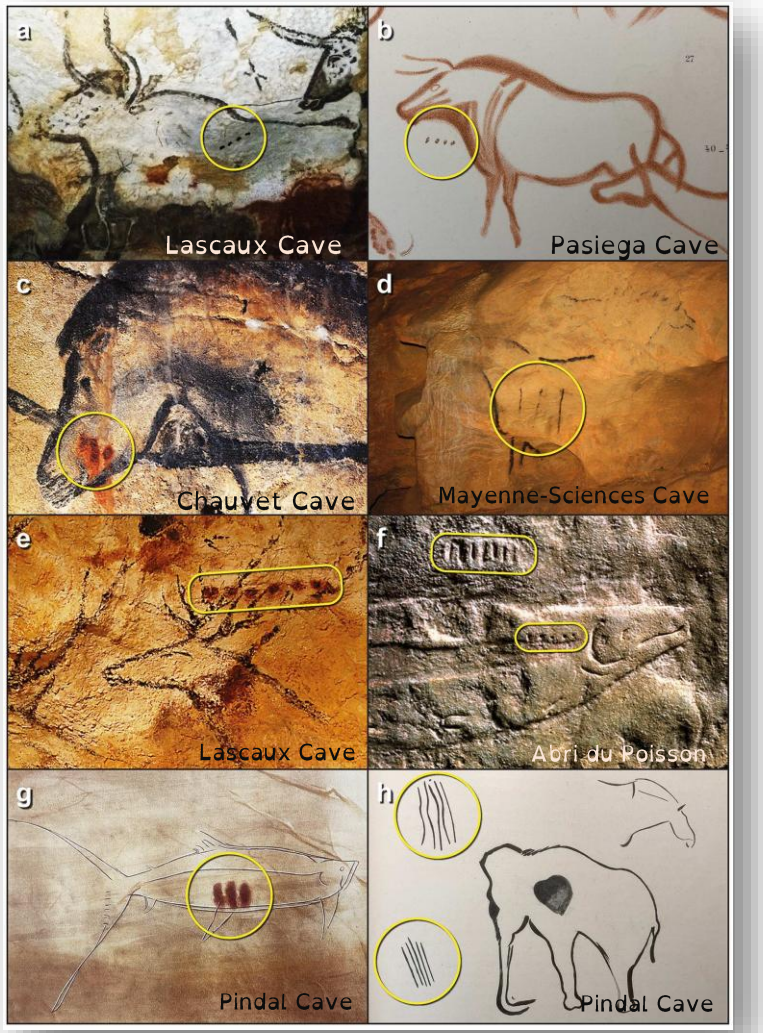
The art of Counting



a
28 ×

b
28 ×

c
28 ×

d
28 ×

e
28 ×

f
28 ×

g
28 ×

h
28 ×

If each point is a lunar month (28 days), how many days have passed for the migration of each of these animals?

In 2023, Bennet Bacon, an archaeology enthusiast, had a theory about what prehistoric people counted in cave art.

His theory was that these dots indicated the migratory cycles of each animal.

Together with the University of Durham (England) they were able to demonstrate that, in some of the cases, the points could correspond to lunar/meteorological calendars to account for animal migrations and birth periods.

This calendar follows the lunar phases to determine the passage of time, the lunar calendar consists of 28 days per month and approximately 13 months in a year.

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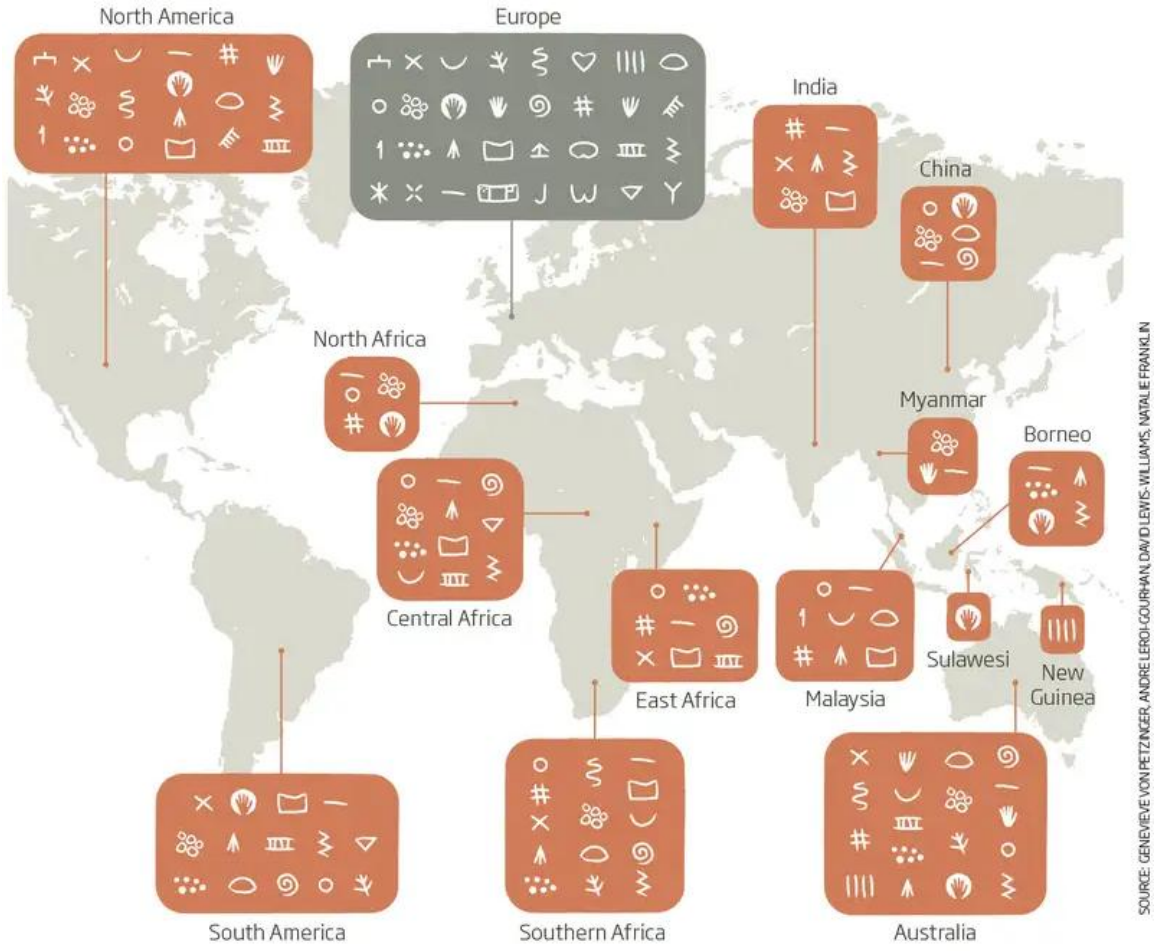
Coding in prehistory



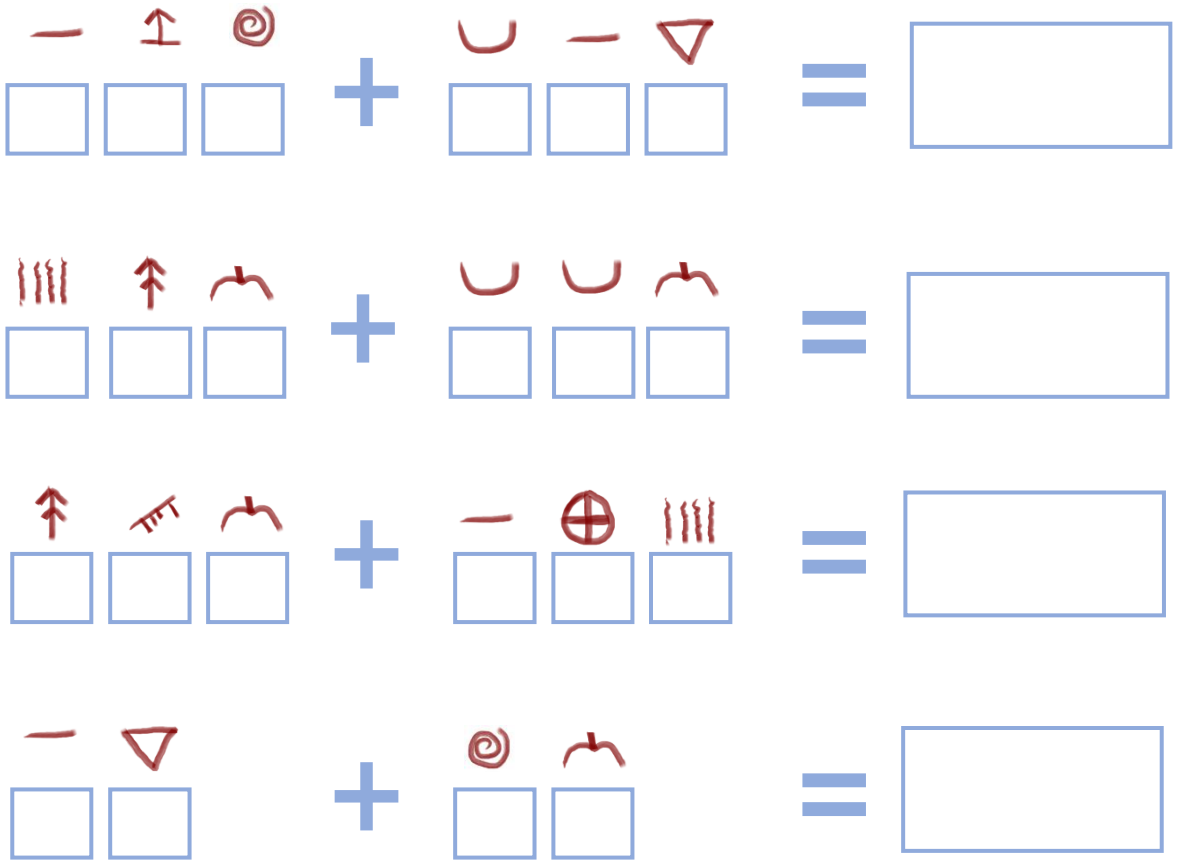
During the Paleolithic, mathematics might have been very important for the survival of the group:

Control of animal migrations, number of animals in a herd, amount of plant and medicinal resources, pregnancy control...

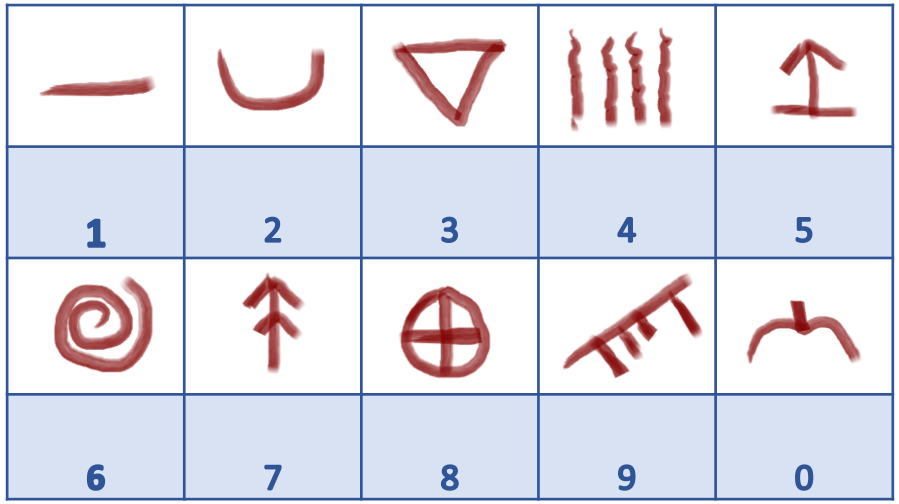
We find many different symbols in Paleolithic art. There have been many theories about their meaning, They could be, as the Durham University group interprets it, mathematical accounting marks. Could it be that mathematics is at the origin of more complex scripts?

In the following activity, we have created a code using prehistoric symbols. Crack our code to reveal a Paleolithic animal!

Coding in prehistory



1	RIN 370	HIE 443	MAM 369	CAV 372
2	UTL 690	OCE 323	CER 401	ALL 300
3	VOL 920	RON 901	BIS 727	ANU 974
4	DO 73	EO 89	NA 94	SO 63



What is the animal hidden in the code? _____