

The Magic of Numbers

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Summary

This book is about how numbers were first used and how they have changed throughout history.

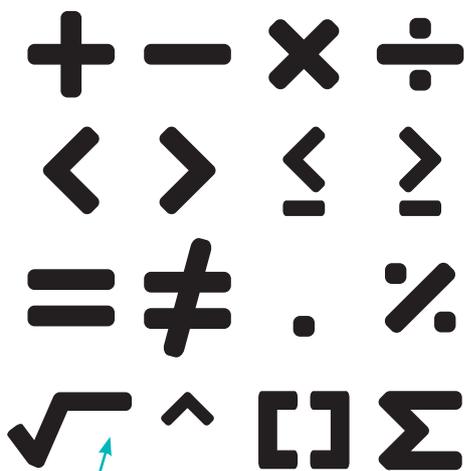
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Before Reading

Think Ahead

Look at the picture and answer the questions.

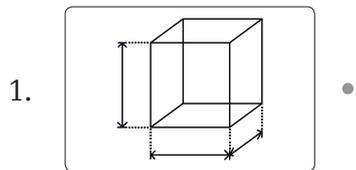


symbol

1. What letters can be used to show numbers? _____
2. What very old machine is used to calculate numbers? _____
3. What common, modern machine is used to do math? _____
4. What do we call these: + = x ≤ ? _____

Vocabulary

A Read and match.



• a. notice

• b. sequence

• c. shell

• d. marks

• e. borrow

• f. dimension

• g. binary

• h. symbol

B Write the word for each definition.

code object multiple of discovery golden ratio

1. _____ finding something or someone for the first time
2. _____ a number found in nature whereby one side is 1 and the other is 1.618
3. _____ the number of times a number is increased
4. _____ a thing that is not alive, like a stone or a chair
5. _____ a set of numbers, symbols, or signs that are used to hide a message

C Choose the word that means about the same as the underlined words.

1. It is useful to have a method or way of doing a job to make it faster or easier.
 - a. dimension of b. system for c. group of d. union for
2. Roman numerals can be used to show numbers.
 - a. sell b. find c. notice d. represent
3. Numbers are need to write down the amount of things.
 - a. sequence b. time c. value d. date
4. Some animals will be aware if you take one of their eggs away from them.
 - a. notice b. think c. hear d. represent

Comprehension

A Match the pictures with the correct sentences.

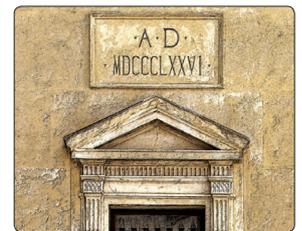
- a. In Italy, they used letters to show the number of something.
- b. Some cultures used marks to show numbers.
- c. An abacus uses rows of numbers to find a larger number.



1. _____



2. _____



3. _____

B Choose the best answer.

1. At what age do children start to notice numbers?
 - a. 6 months
 - b. 12 months
 - c. 2 years
 - d. 4 years

2. Why did people in Egypt and Sumeria need numbers?
 - a. To count children in schools
 - b. To count the houses in a village
 - c. To count the animals they had
 - d. To count the months of the year

3. Which system of counting is mostly used in Europe today?
 - a. The Indian system
 - b. The Roman system
 - c. The Egyptian system
 - d. The African system

C Choose the correct phrase for each picture. One (1) choice will not be used.

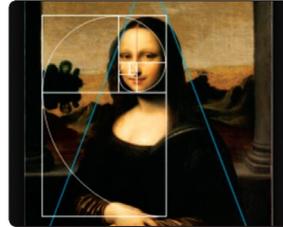
- a. An important religious building in Egypt
- b. Egyptian writing with numbers
- c. Shells that show the golden ratio
- d. Numbers used in binary
- e. A special ratio found in nature



1. _____



2. _____



3. _____



4. _____

D Read each sentence. Write “T” if it is true or “F” if it is false.

1. _____ Someone from China probably discovered the number zero.
2. _____ The Egyptian counting system was changed by the Romans.
3. _____ There is a ratio which can be found many in places in nature.
4. _____ No animals are able to count.
5. _____ The first numbers that were discovered are from about 15,000 years ago.

E Complete the sentences with the correct words.

1. In the Indian writing system, each number has its own _____.
mark symbol
2. It is common to find numbers on antique _____.
objects rows
3. The number 49 is an example of a _____ 7.
multiple of golden ratio
4. The system that uses the numbers 1 and 0 is called _____.
dimension binary
5. Symbols can be used to _____ numbers and other things.
represent notice

F Number the events in order from 1=first to 5=last.

- a. _____ The Romans made changes to the Egyptian system.
- b. _____ Binary was created for computers.
- c. _____ Europeans changed to the Indian system of numbers.
- d. _____ Marks were made on an ancient bone in Africa to show numbers.
- e. _____ The Egyptians created a system of writing.

Think About It

A Look in the reader to write the answers to the following 5-W questions.

Who?	What?	When?	Where?	Why?
The _____ and _____ needed to create a system of numbers for counting animals.	Early people made _____ on objects to count the number of something.	_____ ago, numbers were written on the Ishango Bone in Africa.	In _____, the abacus is often used instead of a calculator to do math.	The Indians used _____ for each number to make it easier to write.

B Complete the sentences below with your own ideas.

From this book, I learned _____

_____.

Before I read this book, I knew _____

_____.

Now I also know _____

_____.