

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.

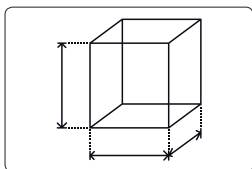


1. What letters can be used to show numbers? _____
2. What very old machine is used to calculate numbers? _____
3. What common, modern machine is used to do math? _____
4. What do we call these: $+$ $=$ \times \leq ? _____

Vocabulary

A Read and match.

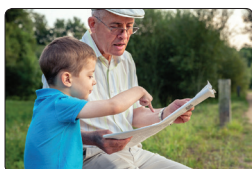
1.



•

• a. notice

2.



•

• b. sequence

3.



•

• c. shell

4.



•

• d. marks

5.



•

• e. borrow

6.



•

• f. dimension

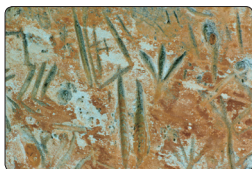
7.



•

• g. binary

8.



•

• 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.

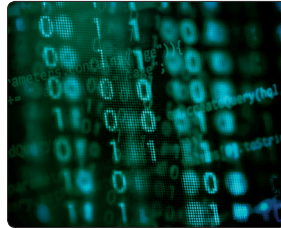
1. At what age do children start to notice numbers?
 - a. 6 months
 - b. 12 months
 - c. 2 years
 - d. 4 years
2. Why did people in Egypt and Sumeria need numbers?
 - a. To count children in schools
 - b. To count the houses in a village
 - c. To count the animals they had
 - d. To count the months of 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.

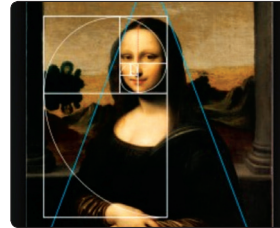
- a. An important religious building in Egypt
- b. Egyptian writing with numbers
- c. Shells that show the golden ratio
- d. Numbers used in binary
- e. A special ratio found in nature



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 _____

_____.