

# Mathematics in English

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## 1 Document

*From “A brief history of Mathematics” by Dr. Karl Fink, in a translation by W. W. Beman and D. E. Smith*

The Roman numerals were probably inherited from the Etruscans. The noteworthy<sup>a</sup> peculiarities are the lack of the zero, the subtractive principle whereby<sup>b</sup> the value of a symbol was diminished by placing before it one of lower order (IV=4, IX=9, XL=40, XC=90), even in cases where the language itself did not signify such a subtraction; and finally the multiplicative effect of a bar over the numerals ( $\overline{\text{II}} = 2000$ ,  $\overline{\text{XXX}} = 30000$ ,  $\overline{\text{C}} = 100000$ ). Also for certain fractions there are special symbols and names. According to Mommsen the Roman number-symbols I, V, X represent the finger, the hand, and the double hand.

## 2 Questions

1. Who probably invented the so-called Roman numerals?
2. What are the peculiarities of the Roman numerals?
3. How was denoted the zero?
4. Explain the “subtractive principle”.
5. Explain the sentence “even in cases where the language itself did not signify such a subtraction”.
6. Explain the “multiplicative effect of a bar over the numerals”.
7. What is Mommsen the Roman’s explanation of the three main symbols?

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<sup>a</sup>interesting

<sup>b</sup>in which