

situated mainly at Athens or Alexandria. In all these schools, however, arithmetic, as we know it today, was of concern only as it helped in geometry, trigonometry, astronomy, etc.

It is of interest to note that the first book on the subject of arithmetic was probably that of Nicomachus, 100 A.D. This remained the standard for 1,000 years.

From Greece, mathematics spread eastward to the Arabs and westward to the Romans. The Arabs are also indebted in a limited degree to the Hindus. While little is known of the Hindu mathematics, it is likely they borrowed from the Greeks through commerce, following the latter's occupation of Alexandria and Egypt. The Hindus and the Chinese have always maintained a very ancient existence and a credit for a correspondingly ancient knowledge of all sciences. These pretensions are beginning to be doubted. In the case of the Hindus there seems to have been little science prior to the period of the Aryan invasion. Careful investigations likewise discount many of the pretensions of the Chinese.

However, the Hindus elaborated systems of computations far in advance of any previous nations. They were familiar with the Rule of Three, simple and compound interest, alligation, pipe or fountain questions, series, square and cube root. They were the first to recognize negative and irrational numbers. Negative numbers were conceived of as debts or liabilities, in contradistinction to assets, represented by positive numbers. They also employed the idea of direction. Direction to the left might be represented by a negative number if direction to the right were represented by a positive number. Both these ideas are used by teachers today in explanation of negative numbers in elementary algebra. Algebra was the real field of the Hindus.

The Arabic debt to the Hindus arose through a Hindu scholar, who was called to Bagdad about 773 A.D. It is probable that the Hindu numerals came at the same time. But it is to the Greeks that the Arabs are mostly indebted. Such works as those of Euclid were translated into Arabic at about the time when the Hindu influence was being felt. The first Arab arithmetician made his appearance about 800 A.D., but he was more interested in astronomy than