

Manuscript based Nepali Indigenous Mathematics

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Abstract: The manuscript is written in an earlier form of Nagari, *Śāradā* or any different script. Mainly it was in use from the 8th to the 12th century. It was found in the northwestern part of India, such as Kashmir and neighboring regions, Kailas. The language in these manuscripts is the combination of Sanskrit and Prakrita. This has been written by a brāhmana and king of mathematicians, for the sake of Hasika, son of Vasiṣṭha, in order that it may be used by his descendants. The originality of any countries' Mathematics, mean the history of the intellectual efforts that men have made in order to understand the indigenous mathematical phenomena or which comes to the same thing, the history of analytic or scientific aspects of mathematical thought. The objective of this article is, explored the development of manuscript based mathematics in early period of Nepal.

Keywords: Manuscript, History, cuneiform, civilization, inscription, Vedas, palm leaf.

1. General Background

The manuscript is a compilation of mathematical rules and examples in verse and prose commentaries on these verses. Typically, a rule is given, with an example or examples, where each example is followed by a statement *nyāsa/ sthāpanā* of the example's numerical information in tabular form, then a computation that works out the example by following the rule step-by-step while quoting it, and finally a verification to confirm that the solution satisfies the problem. This is a style similar to that of Bhāskara I's commentary on the Ganita (mathematics) chapter of the *Āryabhaṭṭya*, including the emphasis on verification that became obsolete in later works. It is preceded by a broken word *rtikāvati*, which is believed to be the same as the place *Mārtikāvata* that is mentioned by *Varāhamihira*. He mentions this place in his *Bṛhatsaṃhitā* among other locations in northwestern India, such as *Takṣaśilā*, *Gandhāra*, etc.[19] Based on this, it is believed that the work of the *Bakhshālī* manuscript may have been composed in that region.

The rules are algorithms and techniques for a variety of problems, such as fundamental mathematical operations, systems of linear equations, quadratic equations,