**VARAHAMIHIRA**



## Sage Varahamihira or was a renowned Astronomer, Mathematician, and Astrologer . He was the renowned scientist, who discovered water on Mars, even before 1500 years. He hailed from Ujjain and is believed to have lived during the Gupta period. It was the golden period of Indian era, where several art, science, culture, architecture, science had developed, and was taught to various people from other parts of the world. Sage Varahamihira is one of the Nine Gems called “Navaratnas”, in the court of King Yashodharman.

## He is considered as the pioneer in mathematics, and a tremendous scholar. He was one of the mathematicians- astrologers of India . Apart from Sanskrit, he also learned Greek and praised for their acumen in Astrology. His works are translated into several languages across the globe.

## Life of Sage Varahamihira:

## Sage Varahamihira was born in the Avanti region, which is in Malwa. He was born to Adityadasa, a great Brahmin scholar himself in both astrology, astronomy and mathematics.

## Adityadasa was a great worshipper of Sun, and he taught Sage Varahamihira in several fields and raised him as a scholar.it is also believed that, throughout his life, he had some quest, which made him discover new things. He met the great mathematician Aryabhata and took astronomy, and mathematics as his lifetime pursuit.

## He had an open mind to even learn languages and science from other parts of the world, and make a comprehensive study. It is also evident from his works that he had intellectual connections with scholars of the other parts of the world.

## Legend of Sage Varahamihira:

## Sage Varahamihira predicted King Vikramaditya’s son’s death. According to him, the King’s son would die in his 18th age. Despite several protection, the son of the king was attacked by a wild boar. Thus, the king to commemorate his accurate predication, and to praise him, conferred him with the title “Varaha”, which is the emblem of Mahada Kingdom. Since then Sage Mihira was called Varahamihira.

## His Works :

### **Pancha-Siddhantika**

Varahamihira's main work is the book Pañcasiddhāntikā ("[Treatise] on the Five [Astronomical] [Canons](https://en.wikipedia.org/wiki/Siddhanta)") dated ca. 575 CE, which gives us information about older Indian texts which are now lost. The work is a treatise on mathematical astronomy and it summarises five earlier astronomical treatises by five authors, namely the [Surya Siddhanta](https://en.wikipedia.org/wiki/Surya_Siddhanta), [Romaka Siddhanta](https://en.wikipedia.org/wiki/Romaka_Siddhanta" \o "Romaka Siddhanta), [Paulisa Siddhanta](https://en.wikipedia.org/wiki/Paulisa_Siddhanta" \o "Paulisa Siddhanta), [Vasishtha Siddhanta](https://en.wikipedia.org/wiki/Vasishtha_Siddhanta) and Paitamaha Siddhanta. It is a compendium of [Vedanga Jyotisha](https://en.wikipedia.org/wiki/Vedanga_Jyotisha) as well as [Hellenistic astronomy](https://en.wikipedia.org/wiki/Hellenistic_astronomy) (withGreek, Egyptian and Roman elements). Varahamihira was the first one to mention that the [Ayanāṃśa](https://en.wikipedia.org/wiki/Ayan%C4%81%E1%B9%83%C5%9Ba" \o "Ayanāṃśa), or the [shifting](https://en.wikipedia.org/wiki/Axial_precession) of the [equinox](https://en.wikipedia.org/wiki/Equinox), is 50.32 [arc seconds](https://en.wikipedia.org/wiki/Minute_and_second_of_arc) per [year](https://en.wikipedia.org/wiki/Year).

They [the Indians] have 5 Siddhāntas:

* Sūrya-Siddhānta, the siddhānta of the Sun, thought to be composed by Lāṭadeva, but actually composed by [Mayasura](https://en.wikipedia.org/wiki/Mayasura) also known as [Mamuni Mayan](https://en.wikipedia.org/wiki/Mamuni_Mayan" \o "Mamuni Mayan) as stated in the text itself.
* Vasishtha-siddhānta, so called from one of the stars of the Great Bear, composed by Vishnucandra,
* Paulisa-siddhānta, so called from Paulisa, the Greek, from the city of Saintra, which is supposed to be Alexandria, composed by Paulisa.
* Romaka-siddhānta, so called from the Rūm, ie. the subjects of the Roman Empire, composed by Śrīsheṇa.
* Paitahama-siddhānta.

### **Brihat-Samhita**

Another important contribution of Varahamihira is the encyclopedic Brihat-Samhita. Although the book is mostly about divination, it also includes a wide range of subjects other than divination.

It covers wide-ranging subjects of human interest, including astronomy, planetary movements, eclipses, rainfall, clouds, architecture, growth of crops, manufacture of perfume, matrimony and domestic relations. The volume expounds on gemstone evaluation criterion found in the Garuda Purana, and elaborates on the sacred Nine Pearls from the same text. It contains 106 chapters and is known as the "great compilation".

### **On Astrology**

Varahamihira's Brihajjataka is a Sanskrit text on predictive astrology based on the Vedic Astrology system. The above manuscript was copied in Nepal in 1399 CE in the Nepalaksara script, and is now in the Cambridge University Library.

Hora Shastra or Brihadjathaka is a most acclaimed astrological work by Mihira. It is mostly in code language. More than a dozen commentaries have been written for this work. The Kerala School of Astrology is mainly based on the Brihadjathaka.

His son Prithuyasas also contributed to Hindu astrology; his book [Hora Sara](https://en.wikipedia.org/wiki/Hora_Sara) is a famous book on horoscopy. [Khana](https://en.wikipedia.org/wiki/Khana_(poet)) (also named Lilavati elsewhere), the medieval Bengali poet astrologer, is believed to be the daughter-in-law of Varahamihira.

## Surya Siddhanta Before 1000 BC, people in India had begun to use astronomical instruments. During this time, the ‘Suryasidhanta', a well-known book for astronomical calculations, was written. The word ‘Suryasidhanta' means ‘sun theory,' and it refers to the measurements of star and planet positions. Some Indian mathematicians later developed their own instruments and methods to help in the understanding of the ‘Suryasidhanta' theory.

## One such invaluable contribution is the introduction of zero in mathematics and the decimal method of calculation. Varahamihira compared Surya Siddhanta with his four other panchsiddhantika treatises, namely Paitamaha Siddhantas, Paulisha Siddhantas, Romaka Siddhantas, and Vasishta Siddhantas. The Surya Siddhanta is also mentioned in Aryabhata's writings.

## ****Contributions To Mathematics****

## The discovery of the trigonometric formulas was one of Varahamihira's mathematical accomplishments. He improved the precision of Aryabhata's sine tables. He defined the algebraic properties of zero and negative numbers, as well as the properties of positive and negative numbers. He was also one of the first mathematicians to discover a variant of the Pascal's triangle. He used it to figure out how to measure binomial coefficients.

## ****Other Significant Contributions****

## Varahamihira also made some important observations in ecology, hydrology, and geology. His assertion that plants and termites can detect underground water is now gaining traction in the scientific community. He was a prolific writer as well.

## He was able to express himself in a unique style, thanks to his mastery of Sanskrit grammar and poetic metre. His encyclopedic knowledge and lively presentation of even the most dry topics, such as astronomy, made him a famous figure. His treatises such as Pancha Siddhantika (Five Principles), Brihatsamhita (Master Collection), and Brahjataka (Astrological work) have elevated him to the same level of Astrology as Kautilya, Manu and Panini in Political Philosophy, Law, and Grammar.