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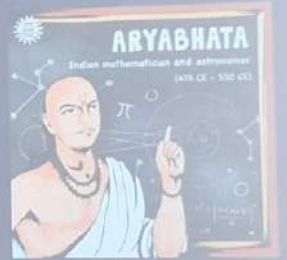




## Aryabhata: The Pioneer of Zero and Place Value

Born in 476 CE in Kusumapura (modern Patna), **Aryabhata** introduced the **place value system**, a cornerstone of modern mathematics. His groundbreaking work, the *Aryabhatiya*, laid the foundation for numerical systems. He remarkably approximated  $\pi$  as  $3.1416$ , a value of astonishing accuracy for his era, and developed early trigonometric concepts such as sine and cosine, essential for astronomy.

Aryabhata's innovations underpin the decimal system used worldwide today, which is indispensable for everything from complex financial transactions to advanced digital computing.



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