Srinivasa Ramanujan (1887-1920)

One of the greatest mathematicians of all time, Srinivasa Ramanujan was born in 1887 in the Southern part of India. He is still remembered for his contributions to the field of mathematics. Theorems formulated by him are to date studied by students across the world and within very few years of his lifespan, he made some exceptional discoveries in mathematics.

Indian Mathematician S. Ramanujan - Biography

Born in 1887, Ramanujan's life, as said by Sri Aurobindo, was a *"rags to mathematical riches"* life story. His geniuses of the 20th century are still giving shape to 21st-century mathematics.
Discussed below is the history, achievements, contributions, etc. of Ramanujan's life journey.

Birth -
- Srinivasa Ramanujan was **born on 22nd December 1887** in the south Indian town of Tamil Nad, named Erode.
- His **father, Kuppuswamy Srinivasa Iyengar** worked as a clerk in a saree shop and his **mother, Komalatamma** was a housewife.
- Since a very early age, he had a keen interest in mathematics and had already become a child prodigy

Srinivasa Ramanujan Education -
- He attained his **early education and schooling from Madras**, where he was enrolled in a local school
- His **love for mathematics had grown at a very young age** and was mostly **self-taught**
- He was a promising student and had won many academic prizes in high school
- But his love for mathematics proved to be a disadvantage when he reached college. As **he continued to excel in only one subject and kept failing in all others**. This resulted in him **dropping out of college**
- However, he continued to work on his collection of mathematical theorems, ideologies and concepts until he got his final breakthrough

Final Break Through -
- **S. Ramanujam did not keep all his discoveries to himself but continued to send his works to International mathematicians**
- In 1912, he was appointed at the position of clerk in the Madras Post Trust Office, where the manager, S.N. Aiyar encouraged him to reach out to G.H. Hardy, a famous mathematician at the Cambridge University
- **In 1913, he had sent the famous letter to Hardy, in which he had attached 120 theorems as a sample of his work**
- Hardy along with another mathematician at Cambridge, J.E.Littlewood **analysed his work and concluded it to be a work of true genius**

- It was after this that his journey and recognition as one of the greatest mathematicians had started

Death -

- In 1919, Ramanujan's health had started to deteriorate, after which he decided to move back to India
- After his return in 1920, his health further worsened and he died at the age of just 32 years

Srinivasa Ramanujan Contributions

- Between 1914 and 1914, while Ramanujan was in England, he along with Hardy published over a dozen research papers
- During the time period of three years, he had published around 30 research papers
- **Hardy and Ramanujan had developed a new method, now called the circle method**, to derive an asymptomatic formula for this function
- **His first paper published, a 17-page work on Bernoulli numbers that appeared in 1911 in the _Journal of the Indian Mathematical Society_**
- One remarkable result of the Hardy-Ramanujan collaboration **was a formula for the number p(n) of partitions of a number 'n'**

Achievements of Srinivasa Ramanujan

- At the age of 12, he had completely read _Loney's book on Plane Trignimetry_ and _A Synopsis of Elementary Results in Pure and Applied Mathematics_, which were way beyond the standard of a high school student
- **In 1916**, he was **granted a Bachelor of Science degree "by research" at the Cambridge University**
- **In 1918**, he became the first Indian to be honoured as a **Fellow of the Royal Society**
- In 1997, _The Ramanujan Journal_ was launched to publish work "in areas of mathematics influenced by Ramanujan"
- **The year 2012 was declared as the National Mathematical Year** as it marked the 125th birth year of one of the greatest Indian mathematicians
- Since 2021, his birth anniversary, **December 22, is observed as the National Mathematicians Day** every year in India

The intention behind encouraging the significance of mathematics was mainly to boost youngsters who are the future of the country and influence them to have a keen interest in analysing the scope of this subject.