Srinivasa Ramanujan

Why in News

Every year, Srinivasa Ramanujan's birth anniversary on **December 22** is commemorated as **National Mathematics Day.**

Key Points

- **About Srinivasa Ramanujan:** 
    - **Born** on 22nd December, 1887 in **Erode,Tamil Nadu** and **died** on 26th April 1920 in Kumbakonam, **Tamil Nadu, India.**
    - **In 1903** he secured a scholarship to the University of Madras but lost it the following year because he neglected all other subjects in pursuit of mathematics.
    - **In 1911** Ramanujan published the **first of his papers** in the Journal of the **Indian Mathematical Society.**
    - **In 1913** he began a correspondence with the British mathematician Godfrey H. Hardy which led to a special scholarship from the **University of Madras and a grant from Trinity College, Cambridge.**
    - **In 1918** he was elected to the **Royal Society of London.**
    - Ramanujan was one of the **youngest members of Britain's Royal Society** and the **first Indian to be elected a Fellow of Trinity College, Cambridge University.**

- **Contributions to Mathematics:**
  - **Formulas and Equations:**
    - Ramanujan compiled around 3,900 results consisting of equations and identities. One of his most treasured findings was his **infinite series for Pi.**
    - He gave several formulas to **calculate the digits of Pi** in many unconventional ways.
  - **Game Theory:**
    - He discovered a long list of new ideas to solve many challenging mathematical problems, which gave a significant impetus to the development of game theory.
    - His contribution to game theory is purely based on intuition and natural talent and remains unrivalled to this day.
  - **Ramanujan's Book:**
    One of Ramanujan's notebooks was discovered by George Andrews in 1976 in the library at Trinity College. Later the contents of this notebook were published as a book.
  - **Ramanujan number:**
    - **1729** is known as the **Ramanujan number.**
    - It is the **smallest number** which can be expressed as the **sum of two different cubes in two different ways.**
      - 1729 is the sum of the **cubes of 10 and 9 -** cube of 10 is 1000 and cube of 9 is 729 adding the two numbers results in 1729.
      - 1729 is also the sum of the cubes of 12 and 1, cube of 12 is 1728 and cube of 1 is 1 adding the two results in 1729.
  - **Other Contributions:** Ramanujan's other notable contributions include **hypergeometric series, the Riemann series, the elliptic integrals, mock theta function, the theory of divergent series, and the functional equations of the zeta function.**

Source:TOI