ABEL PRIZE

- **Abel Prize** is a prize awarded annually by the King of Norway to Mathematicians for outstanding exhibition in the field of Mathematics.
- It is named after Norwegian Mathematics Niels Henrik Abel and directly modeled to the Nobel Price and is equivalent to the Noble Price.
- This year it is awarded to two researchers **László Lovász** from Alfred Renyi Institute of Mathematics in Budapest, Hungary and **Avi Wigderson** from Institute for Advanced Study in Princeton, US.
- They have been awarded the Abel Prize for "their foundational contributions to theoretical computer science and discrete mathematics, and their leading role in shaping them into central fields of modern mathematics."

2021 SPECIALYEAR..

UN declared 2021 as IYPT (International Year of Peace & Trust);

2021 is a special year because it has 22 palindromic dates. One of the date is 12-02-2021.

The word "palindromic" means words that can be read same in backwards and forwards, e.g. madam.

Since 2021 is not a leap year and 1 Feb is a Monday, February is a rectangular month.

Short story

"ZERO" THE TROUBLEMAKER

What have you done?" the doctor bellowed as all eyes turned to him because we all were now on a ship that was put out of action

Dr. Louis was a scientist with a mission. He wanted to create the first robot which would not only serve tea and coffee but would have the power to serve humanity in more meaningful ways.

Thus, he created this robot 'Zero', the Humanoid which looked like him and was willing to do anything . The robot went through all the tests that revealed it's efficiency. After several tests 'Zero' was set to go onto a navy ship to prove its worth there. Everything was going perfectly well until 'Zero' malfunctioned the software of the ship as it was set at the wrong place . **The ship's software couldn't work well with 'Zero' under division operation**. As a result the ship was stranded and unable to move for over two hours.

Dr. Louis was disappointed with 'Zero'. To make the software work everyone tried fixing things and after some time it started working and the decision was taken that 'Zero' should not be used thus. That is it should not be placed in the denominator.

Interestingly though created with the intention that 'Zero' would be a "hero" but actually 'Zero' turned out to be the "villain".
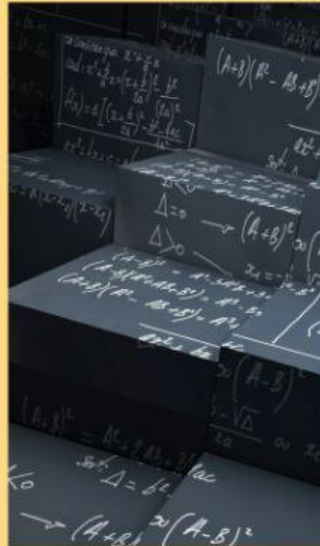
FRIENDSHIP PARADOX

Friendship paradox is an empirical observation that your friends have more friends than you do. But How?

The mathematics behind this is directly related to the arithmetic – geometric mean inequality i.e.

Arithmetic Mean > Geometric Mean

$$\frac{x+y}{2} \geq \sqrt{xy}$$

PI DAY

PI day is celebrated as International Mathematics Day on 14 March every year.

The reason being the value of PI rounded to 2 decimals is 3.14. Taking 3 as the month (March) and 14 as the date in that month.

WHAT IS RIEMANN HYPOTHESIS?

Riemann conjecture or Riemann zeta function has its zeros only at negative even integers and complex numbers with real part 1/2. It is still an unsolved problem of pure mathematics.

However, Professor Kumar Eshwaran of Hyderabad's Sreenidhi Institute of Science and Technology claims that he solved this Riemann hypothesis. But his publication is stated as 'Ambiguous' by many mathematicians.

EDITORS

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ST. ALOYSIUS COLLEGE (AUTO) JABALPUR

DEPARTMENT OF MATHEMATICS

MATHEMATICAL SOCIETY

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News Letter 2020-2021

DEPARTMENT ACTIVITIES 2020 - 21

- Online Certificate Course on 'Research Documentation through Latex from 18th - 25th August 2020. The course was repeated from 5th January-3rd February 2021.
- As an extension activity the Department of Mathematics conducted three National Online Mathematical Quiz during the lockdown period catering to needs of students world-wide respectively on 17th-24th July 2020, 1st- 5th August 2020 & 21st December 2020.
- Online poster competition, Applications of Mathematics' was held on 15th December2020.
- The newsletter of the Aloysian Mathematical Society 2019-20 was released on National Mathematics Day 22nd December 2020.
- More than 250 E-content have been uploaded for students in 2020-21.
- Video lectures have been uploaded by the faculty in MP-PG Higher Education portal.
- Dr. Mandira Kar, Head Department of Mathematics is the recipient of Innovative Researcher and Dedicated Excellent Educationist Award in Mathematics.
- Dr. Archana Pasari was awarded the Doctor of Philosophy in Mathematics in April 2021.

RAMANUJAN MACHINE

Srinivasa Ramanujan is a renowned Indian Mathematician whose main contribution is towards theory of Numbers. Srinivasa Ramanujan's birth day falls on 22 December and is celebrated as the National Mathematics Day.

- The Ramanujan machine is designed to calculate which are irrational numbers (repeating decimal Numbers). eg: epsilon
- Ramanujan Machine is a novel way to do mathematics by computer and has led to new discoveries.