

ALU SCHOOL OF MATHEMATICS



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News Letter

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We are delighted to bring to you this issue of ALU Mathematics News, a monthly newsletter dedicated to the emerging field of Mathematics. This is the first visible –output from the Department of Mathematics, Alagappa University. We are committed to make ALU Mathematics News a continuing and effective vehicle to promote communication, education and networking, as well as stimulate sharing of research, innovations and technological developments in the field. However, we would appreciate your feedback regarding how we could improve this publication and enhance its value to the community. We are keen that this publication eventually grows beyond being a mere –news letter to become an invaluable information resource for the entire Mathematics community, and look forward to your inputs to assist us in this endeavor.



Dr. N. Anbazhagan



Vedic Mathematics

Vedic math's is an ancient system of Mathematics which was followed by the Vedas which was later rediscovered by Jagadguru Shankaracharya Bharti Krishna Tirthaji Maharaja,

making him the '**Father of Vedic Mathematics**'. From 1911-1918 Bharati Krishnaji practiced deep meditation and studied metaphysics and Vedas which led him to practice an arduous life of a Sadhu (saint). He was leading a purely saintly life living on roots and fruits. His life was continuous "Sadhana" (meditation) and he devoted himself to the study of Vedanta and resorted to the forest for deep meditation and spiritual attainments.

In his solitude he discerned the "Ganita-Sutras" or easy Mathematical Formulas on which he compiled the monumental work "Vedic Mathematics" an original contribution in the field of Mathematics and Research. Bharati Krishnaji got the key to Ganita Sutra coded in the Atharva Veda and rediscovered Vedic Mathematics with the help of lexicographers . He found "Sixteen Sutras" or word formulas which cover all the branches of Mathematics - Arithmetic, Algebra, Geometry, Trigonometry, Physics, plan and spherical geometry, conics, calculus- both differential and integral, applied mathematics of all various kinds, dynamics, hydrostatics and all.

Multiplication of 2 digit numbers from 11 to 20

Take 2 numbers like 17 and 19

Place the larger number(19) at the top and the 2nd digit of the smaller number(7) in the bottom.

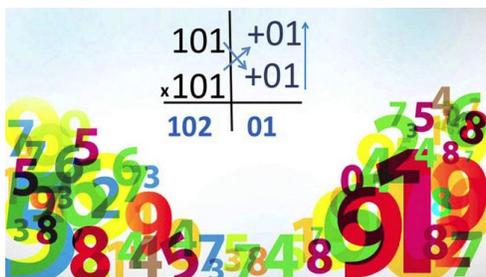
19

7

Add $19+7=26$, Then multiply $26 \times 10=260$

Now, multiply the units digit of both numbers, i.e., $7 \times 9=63$.

Add the two numbers, $260+63$ and the answer is 323.



Multiplication of any two digit number with 11

Take any number like 43 and now separate the numbers as 4_3

Now add; $4+3=7$.

The answer is 473

There is an exception in this case. If there are 4 digits as an answer then the 2nd digit carries over to the first digit.

For example 67×11 .

Separate the numbers as 6_7

Add, $6+7=13$. We have 6137.

Now, carry the number 1 to 6 and add, $6+1=7$

Therefore, the answer is 737.

Tip 3. Squaring two digit numbers that end with 5 - Take 2 numbers like 25 and multiply last two digits, $5 \times 5 = 25$

Now add 1 to the first digit '2', $1+2=3$

Now multiply 3 with the first digit '2', $3 \times 2 = 6$

Hence, the answer is 625.

Squaring two digit numbers

Take any number such as 77. Now add or subtract the number to make it to its nearest multiple of 10.

In this case, add 3 to the number to reach the nearest 10, i.e., $77+3=80$

Now, $(77+3) \times (77-3) = 80 \times 74 = 5920$

The number added was 3. Now square the number and add it to the above product.

Square of $3=9$

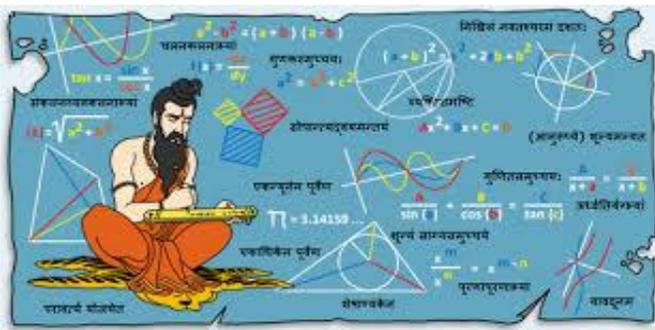
$5920+9=5929$

Multiplying any number to 11

Take the number 6632457

Put the number '0' in front of the above number.

New number is 06632457



Now add,

$7+0=7$

$7+5=12$ (the 1 will get carry over)

$4+5+1=10$ (the 1 will get carry over)

$2+4+1=7$

$3+2=5$

$6+3=9$

$6+6=12$ (the 1 will get carry over)

$0+6+1=7$

Therefore the answer= 72957027

Enjoy Vedic Math

$1 \times 8 + 1 = 9$
 $12 \times 8 + 2 = 98$
 $123 \times 8 + 3 = 987$
 $1234 \times 8 + 4 = 9876$
 $12345 \times 8 + 5 = 98765$
 $123456 \times 8 + 6 = 987654$
 $1234567 \times 8 + 7 = 9876543$
 $12345678 \times 8 + 8 = 98765432$
 $123456789 \times 8 + 9 = 987654321$

Multiplication of any 3 digit numbers

Take any two numbers like 208 and 206

Now subtract the number at units place

$208-8=200$

$206-6=200$

Now select any number and add the unit digit of another number

$208+6=214$

Now multiply, $214 \times 200=42800$

Now multiply the unit digits of both numbers, $8 \times 6=48$

Add, $42800+48=42848$

The product of the numbers 208 and 206 is 42848

Multiplication of a number with 9's

In this type of multiplication, the multiplier (9's) and the multiplicand should have equal number of digits.

Take numbers as 567 and 999.

Subtract 567 by 1, $567-1=566$

The complement of 567 (1000-567) is 433
Therefore the answer is 566433 ("566" "433")

Vedic Mathematics Rediscovered

- How could the Aryan civilization, near the Hunza Valley, 3,000 years ago, mentally compute mathematical operations that today only a calculator could achieve?
- And if the mathematics could not be done mentally, how could they do everything we know today, IN ONE-LINE? eg: converting the fraction $1/19$ into a decimal is an 18 digit answer that requires 35 lines of exhausting long division, how could they do it in a one simple line solution?
- Why is NASA secretly using this MENTAL, ONE-LINE SYSTEM OF ARITHMETIC in the field of Advanced Artificial Intelligence? and not incorporating it into our current mathematics curriculum?
- Why are many of Bill Gate's Mathematicians Indians?
- Is the decimal form of Pi (3.141592) a sonic code for dedications to Krishna?



- What does the Bhagavad Gita have to say about this lost science of Clairvoyant Calculation that the ancient Temple Builders employed?
- How can you become a Human Bio-Calculator?
- Is the current Western Mathematics Curriculum keeping our Children in a state of limited

intelligence?

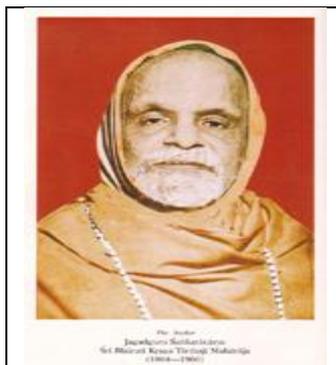


Fig 137a

**Bharati Krsna
Tirthaji**

The answers to all these questions are found by understanding the ancient system of Vedic Mathematics as rediscovered by Bharati Krsna Tirthaji (1884-1960), of Puri Govardhan Math, dux of India in Mathematics and a Sanskrit Philosopher who wrote and spoke perfect English, he reached the position of a Shankacharya (the spiritual head of India 100 years ago, like a Dalai Lama or Vatican Pope), renunciated several high official positions in society to retreat into a forest for 7 years as a yogi, between 1911 and 1918 in which time he collected all the lost mathematical knowledge (Ganita Sutras), improved and reconstructed them to 16 basic Sutras or word formulae that solve every known mathematical problem. These 16 Volumes relating to

the 16 Sutras was our legacy from the ancient past.

This highly intelligent and sophisticated system of Mental, One-Line Arithmetic was taught by The Master to his main student, who today is the leading exponent in the world: Maharishi Mahesh Yogi, the long white-haired and bearded yogi that many of the 60s generation know of as the Beatle's guru. He is considered as the greatest human bio-calculator on the planet today, holding the vision of raising the collective consciousness of all nations by re-introducing the lost Vedic Mathematics Sutras early in a child's spiritual and educational development. Imagine a maths class in India today, like in the times of old when knowledge was passed on as an oral tradition, and the teacher quickly calls or drills out certain numbers to multiply or divide and the children instantly reply with the correct intuitive answers! Today, in schools where Maharishi's Transcendental Meditation technique are used students perform remarkably well academically, viewing Mathematics as a Universal Language and therefore often winning the highest competitive prizes in mathematics.



Fig 137b

Maharishi Mahesh Yogi

Maharishi organized the scattered Vedic Literature into a complete science of consciousness for both its theoretical and practical value, describing the 16 Sutras as fundamental impulses of intelligence that structure all the Laws of Nature and those that govern the Universe.

Maharishi, the Founder of TM, once said:

"Vedic Mathematics is that one field of knowledge which fulfils the purpose of education by developing the total creative genius of the individual, giving him/her the ability to be always spontaneously right and automatically precise so that his/her action, supported by Natural Law, is always effortlessly fulfilling."

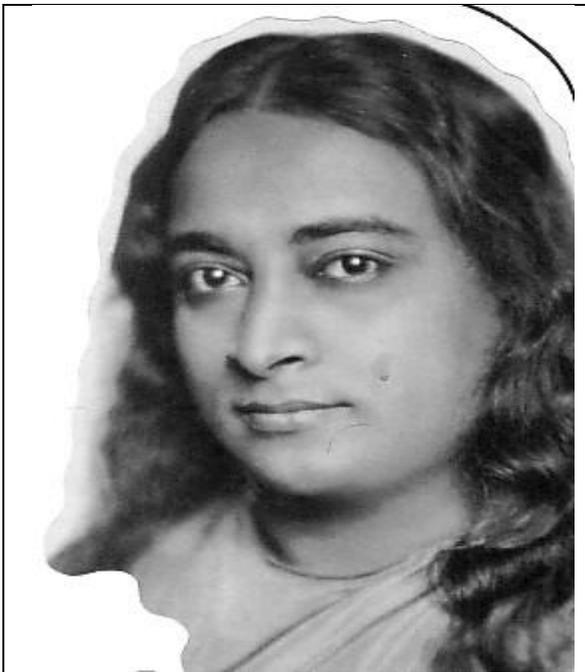


Fig 137c
Yogananda Paramahansa

Unfortunately, all of Bharati Krsna's 16 Volumes for the 16 Sutras were confirmed lost in 1958 after Bharati Krishna Tirthaji returned from the USA tour, sponsored by the Self-Realization Foundation: the successors of Paramahansa Yogananda (who died in 1952, and who introduced Yoga to the West). Disciples observed that people in the streets of India were imitating Tirthaji's lectures and dazzling audiences with mathematically mis-used psychic powers, and begged the Master to write a book just before his death in 1960. This single volume, called VEDIC MATHEMATICS, has become the bible on this subject and spawned a thousand web-sites world wide. Maharishi schools disseminated the teachings to England where certain schools have adopted the Vedic curriculum but the irony is that today India is struggling to release the British curriculum and NASA have adopted it fully in the realms of advanced

robotics. Calculations that can be solved as quick as lightning are a great tool to adopt, but you wouldn't want to teach it worldwide in the fear that you may churn out a generation of child geniuses that may threaten the intellectual status quo. The gift that the Hindus gave to world, thousands of years ago, and that which is currently responsible for global silicon chip technology, was none other than the invention of ZERO and the use of the decimal point. We call our common numbers "Arabic Numerals" but really they extend back to the Hindu concept of creation and void known as "Bindu" or The Zero Point. In Maths, it makes the

Aim of Vedic Mathematics



The aim of Vedic Mathematics is to bring this long-hidden treasure trove of intelligent mathematical knowledge within easy reach of everyone who wishes to obtain it and benefit by it.

