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CERTIFICATE

This is to certify that Dr./Prof./Mr./Ms. Gulab Pandurang SURVE
of K. A. A. N. M. Sonawane Arts, sci & comm. college, satana has attended


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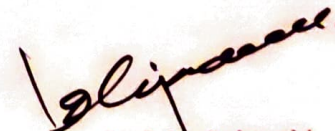
He / She presented the paper on the topic Ancient Vedic Mathematics

We wish him / her all the best for his / her future endeavor.


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Ancient Vedic Mathematics

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Abstract: Ancient Students encounter difficulty with basic arithmetical operations. Some students feel it difficult to manipulate symbols and balance equations. Mathematics, derived from the Veda, provides one line, mental and super-fast methods along with quick cross checking systems. Vedic Mathematics converts a tedious subject into a playful and blissful one which students learn with smiles.

Key words: Arithmetical operations, Learning mathematics, etc.

Introduction: The scholars & gurukul have revived interest in Vedic Mathematics . by offering a new and entirely different approach to the study of Mathematics based on pattern recognition. It allows for constant, Expression of a student's creativity, and is found to be easier to learn.

Many Indian Secondary School students consider Mathematics a very difficult subject. Some students encounter difficulty with basic arithmetical operations. Some students feel it difficult to manipulate symbols and balance equations. In other words, abstract and logical reasoning is their hurdle.

Many such difficulties in learning Mathematics enter into a long list if prepared by an experienced teacher of Mathematics. Volumes have been written on the diagnosis of 'learning difficulties' related to Mathematics and remedial techniques. Learning Mathematics is an unpleasant experience to some students mainly because it involves mental exercise

Of late, a few teachers and scholars have revived interest in Vedic Mathematics which was developed, as a system derived from Vedic principles, by Swami Bharati Krishna Tirthaji in the early decades of the 20th century. . The list so compiled contains Sixteen Sutras and Thirteen Sub - Sutras as stated here under.

SIXTEEN SUTRAS

- | | |
|--|---|
| 1. एकाधिकेन पूर्वेण
<i>Ekādhikena Pūrveṇa</i> (also
a corollary) | 9. चलनकलनाभ्याम्
<i>Calana-Kalanābhyām</i> |
| 2. निखिलं नवतश्चरमं दशतः
<i>Nikhilam Navataścaramam
Daśataḥ</i> | 10. यावद्गुणम्
<i>Yāvadgūnam</i> |
| 3. ऊर्ध्वतियंभ्याम्
<i>Urdhva-tiryagbhyām</i> | 11. व्यष्टिस्तमष्टिः
<i>Vyaṣṭistamaṣṭiḥ</i> |
| 4. परावर्त्यं योजयेत्
<i>Parāvartya Yojayet</i> | 12. शेष्ठाप्यहः केन चरमेण
<i>Ṣeṣṭhāpyaḥ keṇ cārameṇa</i> |
| 5. शून्यं साम्यसमुच्चये
<i>Śūnyaṃ Sāmyasamuccaye</i> | 13. सौप्तान्यद्वयमन्त्यम्
<i>Sopāntyanvayamantyaṃ</i> |
| 6. (प्रानुरूप्ये) शून्यमन्यत्
<i>(Anurūpye) Śūnyamanyat</i> | 14. एकान्यनेन पूर्वेण
<i>Ekanyāneṇa Pūrveṇa</i> |
| 7. संकलनव्यवकलनाभ्याम्
<i>Saṅkalana-vyavakalanā-
bhyām</i> (also a corollary) | 15. गुणितसमुच्चयः
<i>Gūṇitasamuccayaḥ</i> |
| | 16. गुणकसमुच्चयः
<i>Gūṇakasamuccayaḥ</i> |

THIRTEEN SUB – SUTRAS

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|---|---|
| 1. भ्रान्तरूपेण
<i>Anurūpyeṇa</i> | 8. अन्त्ययोर्दशकेऽपि
<i>Antyayordaśake'pi</i> |
| 2. शिष्यते शेषसंज्ञः
<i>Śiṣyate Śeṣasamjñah</i> | 9. अन्त्ययोरेव
<i>Antyayoreva</i> |
| 3. प्राद्यमाद्ये नान्त्यमन्त्येन
<i>Ādyamādyenāntya-mantye-
na</i> | 10. समुच्चयगुणितः
<i>Samuccayagūṇitah</i> |
| 4. केवलैः सप्तकं गुण्यात्
<i>Kevalaiḥ Saptakam Guṇ-
yāt</i> | 11. लोपस्थापनाभ्याम्
<i>Lopanasthāpanābhyām</i> |
| 5. वेष्टनम्
<i>Veṣṭanam</i> | 12. विलोकनम्
<i>Vilokanam</i> |
| 6. यावद्दूनं तावद्दूनम्
<i>Yāvādūnam Tāvādūnam</i> | 13. गुणितसमुच्चयः समुच्चयगुणितः
<i>Gūṇitasamuccayah
Samuccayagūṇitah</i> |
| 7. यावद्दूनं तावद्दूनोक्त्यर्गं च
योजयेत्
<i>Yāvādūnam Tāvādūnikṛtya
Vargaṅca Yojayet</i> | |

Comments :

Dr. Narinder Puri of the Roorke University prepared teaching materials based on Vedic Mathematics during 1986 - 89. A few of his opinions are stated hereunder: Vedic Mathematics with its special features has the inbuilt potential to solve the psychological problem of Mathematics - anxiety.

J.T.Glover (London, 1995) says that the experience of teaching Vedic Mathematics' methods to children has shown that a high degree of mathematical ability can be attained from an early stage while the subject is enjoyed for its own merits.

Nicholas (1984) puts the Vedic Mathematics system as 'one of the most delightful chapters of the 20th century mathematical history'.

Prof. R.C. Gupta (1994) says 'the system has great educational value because the Sutras contain techniques for performing some elementary mathematical operations in simple ways, and results are obtained quickly'.

Prof. J.N. Kapur says 'Vedic Mathematics can be used to remove math-phobia, and can be taught to (school) children as enrichment material along with other high speed methods'.

Dr. Michael Weinless, Chairman of the Department of Mathematics at the M.I.U,

Iowa says thus: 'Vedic Mathematics is easier to learn, faster to use and less prone to error than conventional methods. Furthermore, the techniques of Vedic Mathematics not only enable the students to solve specific mathematical problems; they also develop creativity, logical thinking and intuition.'

Keeping the above observations in view, let us enter Vedic Mathematics as given by Sri Bharati Krishna Tirthaji (1884 - 1960), Sankaracharya of Govardhana Math, Puri. Entering into the methods and procedures, one can realize the importance and applicability of the different formulae (Sutras) and methods.

Conclusion; Vedic Mathematics offers a new and entirely different approach to the study of Mathematics. In this system, for any problem, there is always one general technique applicable to all cases and also a number of special pattern problems. The element of choice and flexibility at each stage keeps the mind lively and alert to develop clarity of thought and intuition, and thereby a holistic development of the human brain automatically takes place.

References:

1. ^ (Trivedi, 1965)
2. ^ (Agrawala, 1992)
3. ^ Myths and reality : On 'Vedic mathematics'. S.G. Dani. School of Mathematics, Tata Institute of Fundamental Research. Frontline, 22 October and 5 November 1993.