MAGIC LOTUS FOR AD 2000

The coming year does not usher in the new millennium; it is just the final year of the second millennium. Even so it is worth celebrating. It gives us one more year for winding up the affairs of the twentieth century. 2000 is also a nice round figure. Therefore, I combined circles and squares and created a magic lotus to herald the New Year.

The inspiration is from Nārāyaṇa Paṇḍita who teaches many complex magic figures (*bhadra-yantras*) in the fourteenth chapter of his *Gaṇitakaumudī* (AD 1356). One of these is a rectangle with 8x4 squares. Here the sum of all numbers in each vertical column (66) is precisely half of the sum of all numbers in each horizontal row (132). Nārāyaṇa then goes on to explain how to rearrange this rectangle in order to produce figures like the thunderbolt (*vajra*), lotus (*paṅkaja*) and so on (see IJHS 27.1, 1992, pp. 97-99 and figs. 96-97).

MAGIC LOTUS FOR A.D. 2000
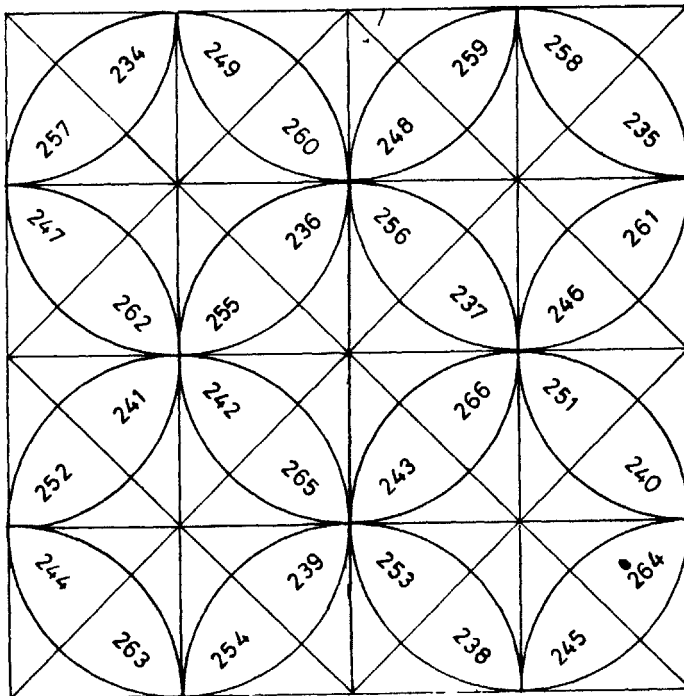
Nārāyaṇa, of course, fills his figures with natural numbers from 1 to 32. I put in a different series so that my magic lotus yields the sum of 2000. If you stop adding midway, you will get half of the magic sum, i.e. 1000. Take, for example, the eight numbers in the first vertical column to the left. Their sum is 2000. The first four numbers add up to 1000; so do the next four (234+257+247+262 = 1000; 241+252+244+263 = 1000). This is so with all vertical columns and horizontal rows. Likewise the eight numbers on both the sides of the two diagonals yield 2000. The four numbers enclosed in any rhombus produce 1000 as the total. Two such figures will naturally indicate the New Year.

The magic is not just linear. It operates in circular paths as well. Take the eight numbers within any of the five circles. They have the sum of 2000. (In the middle circle, however, you do not get the midway result of 1000). Or take any four petals radiating from a common centre. They too yield 2000.

There is more magic still. The figure does not terminate at the apparent borders but flows on from the right margin to the left margin and from the lower border to the upper border. Consequently the semicircle opening to the right joins with the one opening to the left to complete the circle and yield the sum of 2000. So do the four quadrants at the corners. There may be other possibilities. I leave them for you to discover and enjoy the magic throughout the year.

S.R. Sarma

Publications on History of Science

Indian Journal of History of Science

> Editor : S. Sriramachari; Periodicity-Biannual since 1966, Quarterly since 1983, Rs. 25.00; $ 135.00 (Annual Subscription)

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A Bibliography of Sanskrit Works in Astronomy and Mathematics by S. N. Sen, A.K. Bag and S.R. Sarma, 1966, 20.00, $ 5.00.

A bibliography of primary source materials along with their place of availability, secondary studies, commentaries made on the sources etc. indispensable for the study of history of Astronomy and Mathematics in ancient and medieval India.

Some Aspects of Pre-historic Technology in India by H.D. Sankalia, 1966, Rs. 10.00; $ 2.50.

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Fatullah Shirazi by M.A. Alvi and A. Rahman, 1968, Rs. 2.30; $ 0.33.

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A Concise History of Science in India, Editor-D.M. Bose, S.N. Sen and B.V. Subbarayappa, 1971; Reprinted, 1989; Rs. 200.00 $ 70.00.

The volume throws light on the History of Indian Science from pre-historic times to modern age. Major focus is on the survey of source materials, Astronomy, Mathematics, Medicine, Chemical practices and Alchemy, Agriculture, Botany, Zoology, the Physical World, Western Science in India. The work is a joint effort of the historians and scientists and was planned for the Indian National Commission for History of Science.

Āryabhaṭīya of Āryabhaṭa, Text with English translation by K.S. Shukla & K.V. Sarma, 1976, Rs. 21.50, $ 7.00; Ś 2.75.

Āryabhaṭīya of Āryabhaṭa, with the commentary of Sūryadeva Yajvan Edited by K.V. Sarma with Introduction and appendices, 1976, Rs. 25.00, $ 8.00.

Āryabhaṭīya of Āryabhaṭa, (in Hindi), by R.N. Rai, 1976, Rs. 25.00, $ 8.00, £ 3.00.

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Śiṣyadhivṛddhida Tantra of Lalla, New Delhi, 1981

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Science and Technology in Medieval India - A Bibliography of Source, Materials in Sanskrit, Arabic and Persian by A. Rahman, M.A. Alvi, S.A. Khan Ghori and K.V. Samba Murthy, 1982, Rs. 200.00; $ 70.00.

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The seminar proceedigns of the first Indo-Soviet bilateral seminar in history of Science, giving details of scientific and cultural heritage and interaction that took place between two regions-India and Central Asia.

History of Astronomy in India, Editors : S.N. Sen & K.S. Shukla, 1985, Rs. 200.00; $ 100.00, Ś50.00.

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Ancient Glass and India by S.N. Sen and Mamata Chaudhuri, 1985, Price Rs. 100.00; $ 35.00.

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Interaction between Indian and Central Asian Science and Technology in Medieval Times, 1990, Rs. 500.00; $ 170.00 (per set).

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A very popular Sanskrit text of medieval period on Indial alchemy and pharmaceutics, an authentic English translation, useful for modern scientists. This contains useful information on essential pharmaceutical process, apparatuses, heating devices etc.

History of Medicine in India, Editor: P.V. Sharma, 1992, Rs. 350.00, $ 120.00.

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History of Technology in India, Vol. I, Editor A.K. Bag. 1997 Rs. 1200.00 $ 350.00

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