# Ramanujan Magic Square 

by Manjil Saikia - Thursday, April 12, 2012

http://gonitsora.com/ramanujan-magic-square/

In recreational mathematics, a magic square of order $n$ is an arrangement of $n^{2}$ numbers, usually distinct integers, in a square, such that the $n$ numbers in all rows, all columns, and both diagonals sum to the same constant. A normal magic square contains the integers from 1 to $n^{2}$. The term "magic square" is also sometimes used to refer to any of various types of word square. Below we present to you an unique magic square contributed by Mr. T. R. Jothilingam and his sons. He is a Station Master in Southern Railways, in Kudal Nagar, Madurai, in South India. He graduated in Maths in 1974. He also maintains the website Jolly Maths, which has many such interesting things.

Ramanujuan Biography Magic Square --- A trial version.


| 5 | 6 | 1 | 64 | 9 | 5 | 640 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 07 |  |  |  |  | 0 |  |
| 2 | 4 | 2 | 41 | 60 | 1 | 640 |
| 3 | 2 | 0 |  |  | 2 |  |
| $\begin{aligned} & 5 \\ & 4 \end{aligned}$ | 2 | 7 | 11 | 66 | 7 | 640 |
|  | 4 |  |  |  | 6 |  |
| $\begin{aligned} & 9 \\ & 2 \end{aligned}$ | 2 | 9 | 19 | 0 | 3 | 640 |
|  | 5 | 8 |  |  |  |  |
| 119 | 6 | 2 | 60 | 20 | 5 | 640 |
|  | 0 | 7 |  |  | 0 |  |
| 4 | 7 | 8 | 40 | 65 | $1$ | 640 |
| 10 | 4 | 2 | 16 | 50 | 7 | 640 |
|  | 7 |  |  |  | 1 |  |
| 22 | 9 | 6 | 70 | 69 | 3 | 640 |
|  | 8 | 0 |  |  |  |  |
| 35 | 1 | 4 | 54 | 75 | 5 | 640 |
|  | 0 | 0 |  |  | 8 |  |
| 70 | 2 | 4 | 50 | 70 | 2 | 640 |
|  | 0 | 4 |  |  | 3 |  |
| 8 | 7 | 8 5 | 55 | 15 | 5 7 | 640 |


| $\begin{aligned} & 3 \\ & 9 \end{aligned}$ | 3 | 3 | 18 | 99 | $\begin{aligned} & 5 \\ & 0 \end{aligned}$ | 640 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 5 | 5 | 15 | 16 | 4 | 640 |
| 6 | 6 | 0 |  |  | 0 |  |
| 4 | 1 | 1 | 66 | 22 | 3 | 640 |
| 0 | 0 | 0 |  |  | 3 |  |
| 4 | 7 | 7 | 42 | 4 | 9 | 640 |
| 6 | 2 | 8 |  |  | 4 |  |
| 6 | 6 | 6 | 64 | 64 | 6 | 102 |
| 4 | 4 | 4 | 0 | 0 | 4 | 40 |
| 0 | 0 | 0 |  |  | 0 |  |

RAMANUJAN BIOGRAPHY MAGIC SQUARE

## Legend of the Ramanujan Biography Magic Square

From Top left towards right the important dates in the life of Ramanujan was taken in double digits representing either the date of the Month or month or the first or second part of the year.Thus his date of birth 22-12-1887 is taken in four separate squares as $\mathbf{2 2 1 2 1 8 8 7}$.

We have formed TWO SEPARATE 100 X 100 Ramanujan Biography Magic squares with all the important dates, years in the life of Mr. Ramanujan from his birth to till his demise and afterwards also. All the $\mathbf{1 0 0}$ squares of two digits will have a total 2183 and 2179.

From Top left towards right onwards or from top to bottom onwards the magic squares will be of orders $4 \times 4,8 \times 8,12 \times 12,16 \times 16,20 \times 20$, and then in increased orders of $25 \times 25,30 \times 30,36 \times 36$, $42 \times 42,49 \times 49,56 \times 56,64 \times 64,72 \times 72,81 \times 81,90 \times 90$, and finally $100 \times 100$

Thus the total $100 \times 100$ Magic square will contain the following small individual magic squares of sizes noted against as below:
$4 \times 4$ Magic squares 2525 ( $4 \times 4$ )=400 squares
$5 \times 5$ Magic squares $2020(5 \times 5)=500$ squares
$6 \times 6$ Magic squares $2424(6 \times 6)=864$ squares
$7 \times 7$ Magic squares 2828 ( 7 x 7 ) = 1372 squares
$8 \times 8$ Magic squares $3232(8 \times 8)=2048$ squares
$9 \times 9$ Magic squares 3636 ( $9 \times 9$ ) = 2916 squares
$10 \times 10$ Magic squares $1919(10 \times 10)=1900$ squares

Total 184 (Different sized squares) $\mathbf{1 0 , 0 0 0}$ Squares

WE DEFINITELY HOPE IT IS A UNIQUE IDEA AND WE THANK THE ALMIGHTY FOR GIVING US THE IDEA AND FOR HIS KINDNESS TO COMPLETE IT SUCCESSFULLY.

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