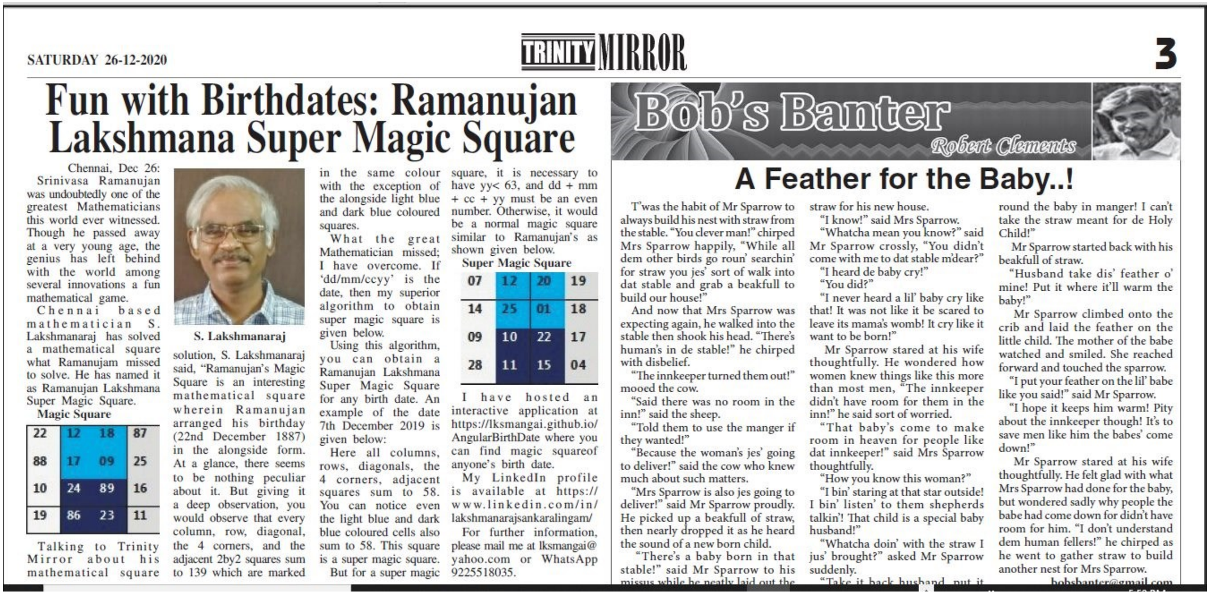

SATURDAY 26-12-2020

TRINITY MIRROR

3

Fun with Birthdates: Ramanujan Lakshmana Super Magic Square

Chennai, Dec 26: Srinivasa Ramanujan was undoubtedly one of the greatest Mathematicians this world ever witnessed. Though he passed away at a very young age, the genius has left behind with the world among several innovations a fun mathematical game.

Chennai based mathematician S. Lakshmanaraj has solved a mathematical square what Ramanujam missed to solve. He has named it as Ramanujan Lakshmana Super Magic Square.

Magic Square

22	12	18	87
88	17	09	25
10	24	89	16
19	86	23	11

Talking to Trinity Mirror about his mathematical square solution, S. Lakshmanaraj said, "Ramanujan's Magic Square is an interesting mathematical square wherein Ramanujan arranged his birthday (22nd December 1887) in the alongside form. At a glance, there seems to be nothing peculiar about it. But giving it a deep observation, you would observe that every column, row, diagonal, the 4 corners, and the adjacent 2by2 squares sum to 139 which are marked in the same colour with the exception of the alongside light blue and dark blue coloured squares.

S. Lakshmanaraj

What the great Mathematician missed; I have overcome. If 'dd/mm/ccyy' is the date, then my superior algorithm to obtain super magic square is given below.

Using this algorithm, you can obtain a Ramanujan Lakshmana Super Magic Square for any birth date. An example of the date 7th December 2019 is given below:

Here all columns, rows, diagonals, the 4 corners, adjacent squares sum to 58. You can notice even the light blue and dark blue coloured cells also sum to 58. This square is a super magic square.

But for a super magic square, it is necessary to have yy< 63, and dd + mm + cc + yy must be an even number. Otherwise, it would be a normal magic square similar to Ramanujan's as shown given below.

Super Magic Square

07	12	20	19
14	25	01	18
09	10	22	17
28	11	15	04

I have hosted an interactive application at https://lksmangai.github.io/AngularBirthDate where you can find magic squareof anyone's birth date.

My LinkedIn profile is available at https://www.linkedin.com/in/lakshmanarajsankaralingam/

For further information, please mail me at lksmangai@yahoo.com or WhatsApp 9225518035.

Bob's Banter

Robert Clements

A Feather for the Baby..!

T'was the habit of Mr Sparrow to always build his nest with straw from the stable. "You clever man!" chirped Mrs Sparrow happily, "While all dem other birds go roun' searchin' for straw you jes' sort of walk into dat stable and grab a beakfull to build our house!"

And now that Mrs Sparrow was expecting again, he walked into the stable then shook his head. "There's human's in de stable!" he chirped with disbelief.

"The innkeeper turned them out!" mooed the cow.

"Said there was no room in the inn!" said the sheep.

"Told them to use the manger if they wanted!"

"Because the woman's jes' going to deliver!" said the cow who knew much about such matters.

"Mrs Sparrow is also jes going to deliver!" said Mr Sparrow proudly. He picked up a beakfull of straw, then nearly dropped it as he heard the sound of a new born child.

"There's a baby born in that stable!" said Mr Sparrow to his missus while he neatly laid out the straw for his new house.

"I know!" said Mrs Sparrow.

"Whatcha mean you know?" said Mr Sparrow crossly, "You didn't come with me to dat stable m'dear?"

"I heard de baby cry!"

"You did?"

"I never heard a lil' baby cry like that! It was not like it be scared to leave its mama's womb! It cry like it want to be born!"

Mr Sparrow stared at his wife thoughtfully. He wondered how women knew things like this more than most men, "The innkeeper didn't have room for them in the inn!" he said sort of worried.

"That baby's come to make room in heaven for people like dat innkeeper!" said Mrs Sparrow thoughtfully.

"How you know this woman?"

"I bin' staring at that star outside! I bin' listen' to them shepherds talkin'! That child is a special baby husband!"

"Whatcha doin' with the straw I jus' brought?" asked Mr Sparrow suddenly.

"Take it back husband, put it round the baby in manger! I can't take the straw meant for de Holy Child!"

Mr Sparrow started back with his beakfull of straw.

"Husband take dis' feather o' mine! Put it where it'll warm the baby!"

Mr Sparrow climbed onto the crib and laid the feather on the little child. The mother of the babe watched and smiled. She reached forward and touched the sparrow.

"I put your feather on the lil' babe like you said!" said Mr Sparrow.

"I hope it keeps him warm! Pity about the innkeeper though! It's to save men like him the babes' come down!"

Mr Sparrow stared at his wife thoughtfully. He felt glad with what Mrs Sparrow had done for the baby, but wondered sadly why people the babe had come down for didn't have room for him. "I don't understand dem human fellers!" he chirped as he went to gather straw to build another nest for Mrs Sparrow.

bobsbanter@gmail.com

Fun with Birthdates

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Ramanujan's Magic Square is an interesting mathematical square where in Ramanujan arranged his birthday (22nd December 1887) in the alongside form. At a glance, there seems to be nothing peculiar about it. But giving it a deep observation, you would observe that every column, row, diagonal, the 4 corners, and the adjacent 2 by 2 squares sum to 139 which are marked in the same colour with the exception of the alongside light blue and dark blue coloured squares.

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dd	*mm*	*cc*	*yy*
aa	*cc + yy - aa*	*-mm - yy + aa + 2 * bb*	*dd + 2 * mm + yy - aa - 2 * bb*
$\frac{dd + mm - cc + yy}{2}$	$\frac{dd + mm + cc - yy}{2}$	$\frac{-dd + mm + cc + yy}{2}$	$\frac{dd - mm + cc + yy}{2}$
mm + cc + yy - aa - bb	*-mm + aa + bb*	*dd + mm + yy - aa - bb*	*-yy + aa + bb*

Using this algorithm, you can obtain a ***Ramanujan Lakshmana Super Magic Square*** for any birthdate. An example of the date 7th December 2019 is given below:

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bb	*dd + mm - bb*	*mm + yy - bb*	*-mm + cc + bb*
mm + cc + yy - aa - bb	*-mm + aa + bb*	*dd + mm + yy - aa - bb*	*-yy + aa + bb*

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