

'The magic numbers of the Professor'

which has 169 as its square). Unfortunately, there is very little distinction between the two types of interesting numbers it is a shame that the book is not more explicit about when it is indulging in tongue-in-cheek numerology, as opposed to real mathematics. As the Professor correctly states, "all numbers are striking in one way or another," but you do have to wonder if the interesting fact that $202 = (202 + 202)/2$ needs the context that 202 people died in the 2002 Bali bombing.

This complaint aside, there was not a single chapter that didn't have me reaching for a pen to try some of the mathematics out for myself. The breadth of topics is impressive, from proposition bets to magic squares, and everyone will find something to whet their mathematical curiosity. Dotted throughout each chapter are various challenges to the reader, which require only a GCSE level of understanding of mathematics and a lot of persistence. These challenges normally take the form of finding extra examples or instances of the maths discussed, such as another way to write 1922 using all nine digits in order ($-1 + 234 + 5 \times 6 \times 7 \times 8 + 9$, as I eventually worked out). There are full solutions, along with recommendations for further reading, provided at the conclusion of each chapter.

As the book is published by The Mathematical Association of America, there is the expected US bias, complete with a non-mathematical look at different pictures that can be made with a one dollar bill. However, you can forgive the authors for some of their more self-indulgent moments when the overall book is as enjoyable as this is. The introduction to the book suggests that the best approach to reading it is to consume it slowly, one chapter at a time, which is very good advice. If you gradually work your way through the story of the Professor and his magic numbers, you will find some truly fantastic pieces of unarguably interesting mathematics.

Book details:

The magic numbers of the Professor

Owen O'Shea and Underwood Dudley

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About the author

Matt Parker is an enthusiastic mathematician whose goal in life is to make more people excited about mathematics. He studied mathematics and physics in Australia before training to be a teacher and working in both Australia and the UK. Matt now writes and speaks about engaging mathematics and his favourite number is currently 28.



Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the [NRICH](#) and [MOTIVATE](#) sites.