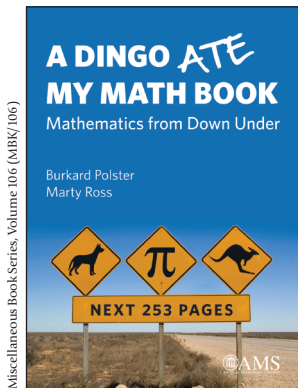




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Miscellaneous Book Series, Volume 106 (MBK/106)

## *A Dingo Ate My Math Book*

*Mathematics from Down Under*

By Burkard Polster and Marty Ross

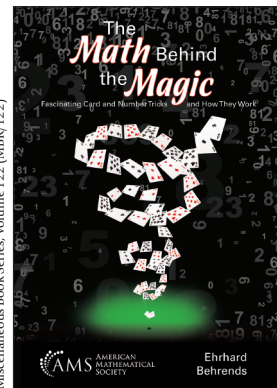
*A Dingo Ate My Math Book* is a collection of short self-contained mathematical vignettes that will make you laugh as it edifies you. Each page contains colorful illustrations and equally colorful titles that draw you into a broad range of two- to three-

page mathematical tidbits arising in the context of everyday life. Each story ends with a brief puzzler (solutions can be found in the back of the book).

Polster and Ross write with a distinctive sense of humor, playful irreverence, and plentiful references to things Australian. The stories start with something typically seen and barely noticed and then move on to unexpected and intriguing observations that invite exploration. In one, Polster and Ross, the “math masters,” enter an Italian restaurant in Melbourne and notice that the innocuous-looking tile pattern covering the floor actually provides a visual proof of the Pythagorean theorem. In another, they discuss the oft-heard lament over the difficulties Australia’s World Cup soccer team has in getting past the first round and ponder what it really means to be in the “group of death.”

Perhaps the strongest current running through the topics in the book arises from the authors’ wry observations of the silliness that can be found in our daily lives. This ranges from the consequential to the seemingly arbitrary. What is the minimum proportion of votes required to win an election under an electorate system? When any calculus student knows the optimal shape of cylindrical tin cans, why are they designed in such a variety of shapes?

This book is full of such questions and is a fun conversation piece for get-togethers with families and friends.



Miscellaneous Book Series, Volume 122 (MBK/122)

## *The Math Behind the Magic*

By Ehrhard Behrends

Did you ever want to try your hand at card magic, but felt too clumsy to learn slight-of-hand? Here is your opportunity! This book will teach you how to wow your friends and family with magic tricks based on the power of math rather than dexterous card manipulation. For example:

when playing cards we randomize them by standard shuffling techniques, so how can it be possible that after a volunteer shuffles the cards, you are able to predict where certain cards will lie in the deck? What if you take a seemingly randomly arranged sequence of cards and ask a volunteer to remove a card when you are not looking? If you’ve set up the cards correctly in advance, you will immediately be able to identify the card and mystify your audience.

But in addition to the great tricks, what adds to the magic of this particular book is the way the author sneaks in a lot of abstract mathematical ideas, even if it might go over the heads of children who just want to learn the tricks and be entertained. The multitude of potential games and tricks (and mathematics!) contained in cards is inherent in their brilliant composition. Consider the vast number of ways to permute them balanced against the potential patterns that can form. Add to this the physical size and malleability of cards that make shuffling and dealing the way we do in games like solitaire, blackjack, and bridge so easy. This book explains how to exploit these and come up with striking card tricks, and in the process experience chance and certainty, patterns and invariants of group actions, and elements of number theory and coding theory in an immediate and kinesthetic way.

The book is an easy and fun read at a variety of different levels. There are plenty of colorful illustrations, and explanations are down-to-earth and accessible. This book is highly recommended for family entertainment and is aimed at middle-schoolers and above.

The AMS Bookshelf is prepared bimonthly by AMS Book Acquisitions Consultant Eriko Hironaka. Her email address is [ehironaka@amsbooks.org](mailto:ehironaka@amsbooks.org).