BOOK REVIEWS

"Mathematical Excursions" by H.A. Merrill

Published by Dover Publications, $1.60

This book was first published 40 years ago. It is now available as a paperback, showing that it is certainly not out of date. It is all about the amazing things one can do with whole numbers and, for that reason, should particularly appeal to 1st Form readers not yet wholly familiar with all the number tricks one can use.

Not only do each of the 14 chapters finish with problems for the reader to solve which are rather in the style of Follow up Problems at the end of Parabola articles, but the book itself explains things through solving numerical problems. If you buy it, it will keep you busy for a long time!

"Book of Modern Puzzles" by G.L. Kaufman

Published by Dover Publications, $1.85

A book that you might think not mathematical at all, when you first examine it, although you will probably consider it an attractive puzzle book. But when you re-examine it you will find an awful lot of mathematical ideas in it. Thus, there are many logic questions of the type that end up with "What was Jack's last name?", there is a section on Playing Card puzzles as well as many missing word or letter problems. A pleasant companion for the Christmas holidays!

"Mathematical Diversions" by J.A.H. Hunter and J.S. Madachy

Published by Van Nostrand, $7.50

A delightful book which should appeal to all our readers. I cannot do better than quote the author's preface:—

> ' "Something old, and something new". This seems to sum up what we have tried to achieve in this book. And with emphasis on the fun that the true lover of recreational mathematics finds in doing, rather than reading about the doing.'

I think they did achieve the above. Some of the chapter headings may help to give the flavour of the book: "From Paradox to Parastichy, Mystic Arrays, Topological Delights, Fun with Shapes, Alphametics and the Like, What are the odds?".

"Tomorrow's Math" (Second Edition) by C.S. Ogilvy

Published by Oxford University Press, $6.95

The subtitle is "unsolved problems for the amateur." Here are some:

1. A baby worm is 1 inch long. What is the shape and area of the smallest blanket with which the mother worm can surely cover the baby worm, given that it doesn't move once it's gone to sleep?
2. Can a tetrahedron be divided by plane cuts into a finite number of pieces that can be reassembled to form a cube?
3. Given a regular 12-hedron and a regular 20-hedron both of them inscribable in the same radius sphere, which has the greater volume? (This is solved in the book; a surprising answer, too!)

But there are a lot of others which will fascinate you as well as an excellent chapter on solving problems.

"Excursions in Number Theory" by C.S. Ogilvy and J.T. Anderson

Published by Oxford University Press, $6.25

This is another good introduction to a branch of mathematics that so many professional and amateur mathematicians have always found fascinating. Whether this is because elementary number theory demands a huge variety of approaches to apparently similar questions so that the most sophisticated mathematical explanations rub shoulders with very simple ones or whether it is because of the surprising results that turn up, as in the formula for the n'th Fibonacci number, I don't know. Anyway, it is *not* a mental health hazard, so read this book; you should enjoy it. Even the knowledgeable may find things in it they didn't know. For example, what is the probability that two numbers selected at random are relatively prime?

If you can't buy the books, try to get them into your school library.

M. Greening

A mathematician named Klein
Thought the Moebius band was divine.
Said he: 'If you glue
The edges of two,
You'll get a weird bottle like mine.'