BOOK REVIEWS

"An Introduction to Computer Programming" by Training and Personnel Development Ltd **Published by Methuen and Co., $1.15**

This is an easy programmed introduction to the basic principles of computers for those who have no knowledge of them. It can be worked through in an hour or two and should present no difficulties for Parabola readers. If anything, it may well be a bit too simple for them.

"Mathematical Snapshots" by H. Steinhaus
Published by Oxford University Press, $7.50

This is a very much visual mathematics. Photographs are used instead of the more usual diagrams or drawings to illustrate facts about the Platonic solids, Moebius strips, soap bubbles and so on. It's striking how much more vividly this method illustrates the mathematical ideas and how effectively it conveys the mathematics of less geometric topics such as Fibonacci series, the binomial theorem, probability, etc.

I was particularly impressed with the section on ruled surfaces such as cores and hyperboloids and his excellent pictorial account of curve drawing on curved surfaces.

An unusual book which would be a great asset to any school library.

"How to Take a Chance" by Darrell Huff
A Pelican published by Penguin Books, $0.85

A magnificent introduction to probability which I would strongly advise all readers to buy. I will! It uses homely, familiar, everyday questions as introductions to basic ideas of probability and statistics and enlivens them with amusing diagrams. While being an excellent account of probability for the non-expert and the layman, it is also a worthwhile book for those already well acquainted with the subject, both for its possibly hitherto unknown examples and its ability to get quickly to the basic principle behind any particular application.

A few months ago I heard ABC radio report that four bridge players on the North Coast had each received a complete suit in one game and that the odds against this were one million to one. If the announcer had read this book his instincts would have told him he must be wildly wrong; in fact, as Darrell Huff points out, the odds are 10^{28} to 1 – or 10^{22} millions to 1. Incidentally it also contains a very good introduction to Game Theory, in one of its chapters.

"The Treasury of Mathematics" by Henrietta Midonick, Vols. 1 and 2.
A Pelican published by Penguin Books, $1.80 each volume

This is a most extensive work containing significant extracts from key documents and books in the history of mathematics, from the Babylonians to the start of our century. Many reproductions of the actual clay tablets or papyri from Babylon and Egypt are printed along with the translations, as well as the numerical notation of the Mayan civilisation and the early hand printed European mathematical books of Chaucer's time.

The history of mathematical discovery, like that of human civilisation, is, for much of its length, a story of independent and sometimes parallel development in different parts of the world, but these books certainly make one realise vividly that it started long before Ancient Greek society.

I think I would find most use for it as a reference book, something not only useful for settling arguments but invaluable for finding out exactly how the "Old Masters" of mathematics expressed their own research and views.

"The Surprise Attack in Mathematical Problems" by L.A. Graham
Published by Dover Publications, $2.10

This is much more than a mere collection of 52 problems, all of which will appeal to Parabola problem solvers. I can do no better than quote from the foreword:—

> "In this book we have selected from the scores of original problems used in our column in recent years those that emphasise the feature of surprise — the unexpected approach that not only brings simplicity to the solution but often broadens the scope of the problem and adds an esoteric touch dear to the mathematician's heart."

In fact a variety of different solutions based on different approaches are discussed for each problem in a way I found most valuable. You will, I think, particularly like the very simple solution, involving no calculus, to the problem of finding the volume common to two right circular cylinders of equal radius whose axes intersect at right angles. Rush off and buy the book for this answer alone!

"Mathematics for the Million" by L. Hogben
Published by Pocket Books Inc., $1.20

This is a paperback version of this excellent book which was reviewed in Vol. 9 No. 1 last year.

M. Greening