

BOOK REVIEWS

"Excursions in Geometry" by C.S. Ogilvy

Published by Oxford University Press. Price: \$6.00

I have always been keen on geometry since I first encountered it, so possibly you should take my enthusiasm for this book with a grain of salt. But the author puts the topics before one in such an engaging and clear way that I think you will be delighted with this book too.

In case you should think that geometry just means more Euclidean or coordinate geometry done in the same way you are used to, let me point out that there's a lot more to geometry than those two aspects as you will discover in this book: projective geometry and inversive geometry for example bring up new questions as well as new solutions to old questions. Above all, geometry gives much scope for elegant and beautiful reasoning as I am sure this book will show you.

"Through the Mathescope" by C.S. Ogilvy

Published by Oxford University Press. Price: \$6.00

Since writing this book, Dr Ogilvy has written other books to popularise mathematics, many of which I have already reviewed. This one is less specialised and possibly simpler than the others, although the author is always able to present mathematical problems starkly and simply. It should appeal particularly to the new reader of Parabola anxious to find out more about the pleasures of recreational mathematics, while the experienced enthusiast may still discover a new way of looking at familiar topics.

The only thing I regret personally is that the book includes little information about the intriguing properties of integers, particularly prime numbers, but there's plenty to keep you thinking, from probability to topology to soap bubbles.

"How to Lie with Statistics" by Darrell Huff

A Pelican Book published by Penguin Books. Price: \$1.20

This is an old favourite of mine which has only just been published in paperback form. When you next hear of the average wage being \$104 a week, say, you should pause a moment, the author suggests, and ask whether this is the mean, the median or the mode. Those of you in Forms I to IV will know the very considerable difference between these types of average. Think of the difference that will come from including 10 people who each earn \$50,000 a year — it may well be considerable for the mean but will hardly affect the mode.

The cartoons and sketches scattered through the text will add to your enjoyment of it.

"The Ambidextrous Universe" by Martin Gardner

A Pelican Book published by Penguin Books. Price: \$1.20

Those of you who have read this author's books before will need no recommendation from me; those who haven't, are strongly advised to get hold of this book somehow.

Martin Gardner shows how up to 1956 all the evidence pointed to the laws of nature being symmetric, favouring neither left-hand or right-hand. This meant that essentially one could not distinguish between experiments in physics seen directly or seen in a mirror, unless one had prior knowledge. As he points out, this neutrality would have made it impossible to tell other intelligent beings in our galaxy, when or if we communicate with them, what we mean by left or right, north or south. (No, the swing of a compass needle wouldn't help.)

Then came the proof, in 1957, that a particular experiment in nuclear physics was asymmetric, that Nature was left-handed.

What this experiment was you'll find in the book! Incidentally the first 3 or 4 chapters discuss geometric symmetry; did you know that flexagons, like Mobius strips, are asymmetric?

"Fun with Figures" by J.A.H. Hunter

Published by Dover Publications. Price: \$1.05

Quite a wide variety of problems using only Junior High School mathematics similar to those often set in newspapers and magazines. For example:

It's always the cups that get broken, and Mary has such an accumulation of odd saucers. So today she made a point of buying some extra cups: she chose good china, but plain white, as that would be easier to replace.

The saucers cost 19 cents each but she had to pay 37 cents apiece for the cups, and you'd say she got good value for her outlay of \$5.58. But can you say how many saucers she bought?

An entertaining book which should appeal particularly to our younger readers.

"Mathematical Fun, Games and Puzzles" by J. Frohlichstein

Published by Dover Publications. Price: \$2.40

This book contains 350 to 400 puzzles and games based on elementary mathematics. I think, however, the mathematics will be a bit too elementary for most Parabola readers though some of the applications detailed may be of some interest. Should you, however, wish to puzzle or entertain younger brothers or sisters you might well find this book useful and it does have answers in case you too should get tripped up by any question!

