BOOK REVIEWS

"Mathematical Puzzles and Perplexities" by Claude Birtwhistle
Published by George Allen and Unwin.
(Aust. agents, The Australian Publishing Co.) Hardback. U.K. price £2.95

This is perhaps a bit of a "beginner's book", but it's a good one. I think our newer readers in particular, would find its discussion of how to tackle problems very helpful. By the way, it has cross-number puzzles (just like Parabola!).

"From Geometry to Topology" by Graham Flegg
Published by The English Universities Press
(Aust. agents Hodder & Stoughton Australia Ltd) Hardback. Price $11.45

I think most serious mathematical enthusiasts would consider this a good book to own. The subject is a fascinating one and repays closer study. The more you know about it, the more fascinating it becomes. The author aims to take the reader in a painless way from his or her first intuitive view of the topic to a deeper understanding which follows from a more abstract mathematical approach. I think he succeeds. The book includes problems and solutions which, besides being interesting in themselves, give one a useful check on what one has learnt.

"Polyhedron Models" by Magnus J. Wenninger
Published by Cambridge University Press. Paperback. $6.55 (1974)

A polyhedron is a solid with many (poly) plane faces. The 5 regular ones – that is, having every face the same regular polygon – are called the Platonic solids. But one can also have convex polyhedra which are symmetric and have, say, both equilateral triangles and squares for their faces. This book contains descriptions of how to make 75 of these – plus another 34 non-convex uniform polyhedra. Each polyhedron has a page to itself containing clear instructions for making it, a photograph of it and its mathematical classification.

Mind you, if you buy this book, you might become an addict to polyhedron model making, like the author – but it's not a health hazard!

"A Book of Curves" by E.H. Lockwood
Published by Cambridge University Press. $7.10 (1974)

I consider, as the author does, that the geometric properties of the many different classes of curves he examines – conics, cycloidal curves, spirals, glissettes, pedal curves, etc are fascinating; they have certainly intrigued mathematicians throughout the ages as I think they will intrigue you. Incidentally, the title of Part II, "Ways of finding new curves", lives up to the promise of its name.

The text is pleasantly laid out and well-illustrated with clear diagrams.