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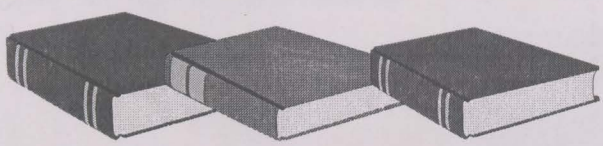
The Penguin Book of Curious and Interesting Mathematics* by David Wells, Penguin, 1997, v+ 319 pp, ISBN 014-02-3603-1.** ..... ***Reviewed by Leong Yu Kiang

This book is a continuation of a series of three earlier books by the same author and with the same title except for the last word which had been "Puzzles" , "Numbers" and "Geometry" respectively. (The one on geometry was reviewed by Chan Sing Chun in *Mathematical Medley Vol. 1 No. 1 (1996).*) The author is involved in the popularization of mathematics since 1981 and has been a keen inventor of games and puzzles since the mid-seventies. He has taught mathematics in schools and writes extensively on mathematics

There are no chapters in this book. One item follows another with no attempt or intention to organise them in any systematic or thematic way. There is, of course, no need to. Each item is as self-contained as an individual gem-stone, often one more sparkling than another but always independent of the others. Turn to any page and you will find something short enough to read during a brief respite and yet captivating enough to make you want to turn to yet another page. You do not need to like or to have liked mathematics at any stage of your life to appreciate this book. All you need is some curiosity, if not awe, about this particular activity of the human intellect and perhaps some sympathy for the occasionally tortuous exertion of the brain inflicted on itself.

It is a collection of anecdotes about mathematicians made by mathematicians themselves, often in a self-effacing way and sometimes in a way which makes the non-mathematician wonder why they are so excited about the subject. Quite a number of these stories are almost legendary and have been told and retold in one version or another. Some of them are of recent vintage and can be both entertaining and insightful. There are some nice-looking (mathematicians would say "beautiful") equations and formulae, but almost no formal proofs to intimidate you - except for an elegant pictorial proof (without words) of Pythagoras' theorem by Leonardo da Vinci and a passage of W.W. Sawyer that involves some seemingly complicated algebraic manipulation (done for a rather unusual reason).



It is also an assortment of personal views of non-mathematicians who have something (not always complimentary) to say about this unusual profession. You hear from people like the philosophers Schopenhauer and Voltaire, the opera librettist W.S. Gilbert (of Gilbert and Sullivan fame), the novelist Jonathan Swift, the British politician and writer Winston Churchill, the poet W.H. Auden and numerous other literary figures whose names you would not expect to surface in a book about mathematics. It is also a compendium of quotations by some of the great practitioners of this art, such as Paul Erdos, Bertrand Russel, Hermann Weyl, Harish-Chandra, Evariste Galois, David Hilbert, Descartes, Jacques Hadamard and scores of household names in modern mathematics.

There are brief intriguing accounts of three women mathematicians Sonya Kovalevskaya, Grace Chisholm Young and Ada Lovelace, whose names even professional mathematicians may not be familiar with. Not many are aware that Ada Lovelace (1815 - 1853), a daughter of the poet Lord Byron, had views of computers and computing far ahead of her times and that the computer language Ada is named after her. While the story of Kovalyevskaya is, by now, rather classical, the story of Grace Young and her husband W.H. Young reflects the tragic circumstances of the Second World War.

The stories and the quotations can be easily forgotten after a first reading. On reading them again, you will enjoy and appreciate them even more. And if you are game for the original sources of the quotations or if your appetite for further details had only been just stimulated, there are notes at the end of the book to invite you to explore beyond the superficial. This book reveals a lighter and less austere side of mathematics which you would never have glimpsed from your textbooks or your school lessons. It could change your traditional views about mathematics.