

BOOK REVIEWS

John Grant McLoughlin

Math Through the Ages: A Gentle History for Teachers and Others
(Expanded Edition)

By William P. Berlinghoff and Fernando Q. Gouvêa, published by the Mathematical Association of America and Oxton House Publishers, 2004
ISBN 0-88385-736-7, hardcover, 273+xii pages, US\$47.95

Reviewed by **John Grant McLoughlin**, University of New Brunswick,
Fredericton, NB

This book is not typical of those received for review in *CRUX with MAYHEM*. As the book review editor, I must set some books aside as they clearly do not fall within the mandate of the journal. Of course, this is a problem-solving journal. Usually problems tend to appear like those in the various collections seen throughout the journal. However, problem-solving from an historical perspective takes on other images. It is hard to appreciate the challenges of doing mathematics without a standard notation for operational symbols or in the absence of a symbol to represent zero. *Math Through the Ages* offers insight into such problems through “sketches” including *Reading and Writing Arithmetic: Where the Symbols Came From* and *Nothing Becomes a Number: The Story of Zero*.

Math Through the Ages is divided into two core sections: The History of Mathematics in a Large Nutshell (approximately sixty pages in length) and Sketches (twenty-five pieces of about six to eight pages each, intended to “open up a deeper understanding of both the mathematics and the historical context of each topic covered”). Any teacher of mathematics will appreciate the gentleness in that one can open the book at any sketch to learn more about mathematics. Each sketch concludes with a collection of questions and project ideas that seem designed more to focus discussion in a class that may use the book as a text. However, there are mathematical problems sprinkled within the questions. These take the form of justifications, explanations, calculations, analysis of situations (as in the discussion of probability), and derivations (as with the Pythagorean Theorem).

The original publisher, Oxton House (Farmington, Maine), provided a very inexpensive book that was used as a text in various colleges. Subsequently the Mathematical Association of America (MAA) adopted the book for publication. The hard cover along with extensions of the questions and projects were the noteworthy changes in the “expanded edition”. In fact, the MAA can easily reach a larger audience; however, the approximate doubling of the price reinforces the fact that those of us who obtained the original green paperback version have a good book in a very accessible form. *Math Through the Ages* would be a valuable acquisition as a library addition or teaching resource. The breadth of the book’s content blends with the stories and its alternate presentation to provide insight to any reader wishing to learn more about topics that they commonly encounter in teaching or studies.

The book concludes with an extensive listing of suggested resources and references. Those interested in learning more about the history of mathematics may avail themselves of a compact disc entitled *Historical Modules for the Teaching and Learning of Mathematics* edited by Victor J. Katz and Karen Dee Michalowicz. The authors recommend it as a forthcoming resource that was published later in 2004 by the MAA. The eleven modules are designed as teaching units for mainly secondary school topics including statistics, combinatorics, Archimedes, polynomials, and functions.

Minnesota Math League XXV 1980–2005

By A. Wayne Roberts, Beaver's Pond Press, 2005

ISBN 978-1-59298-111-3, softcover, 242+ix pages, US\$25.

Reviewed by **Robert L. Crane**, *Sydney Academy, Sydney, NS*

Having taught high school mathematics for the past 34 years and overseeing our school's active participation in the Nova Scotia Math League (a high school mathematics competition in Nova Scotia) since its inception five years ago, my interest was piqued by the title. For any high school which has not yet participated in such mathematics competitions, this book should be considered as a primary resource to illuminate the path toward successful participation.

One of the accomplishments of *Minnesota Math League* is to document in a coherent manner what its back cover promises: "... a marshalling of evidence that should lay to rest the myth that mathematical talent is an inborn gift that will develop with or without special programs." To mathematics teachers who love their craft, this book preaches to the converted. However, it does show that the importance of teachers in the process can never be underestimated.

The author reveals that good things just do not happen on their own. To go from zero to a well-organized and involved series of mathematics competitions takes first the recognition of a need and then the commitment to see it through. The pride of what has been accomplished in Minnesota rings true throughout the book.

Thirty pages are dedicated to questions used in Minnesota High School Mathematics League: the individual and team events. Considering that coaching a team takes time to prepare, these can be used as a valuable resource in a pinch. For schools not yet involved in mathematics competitions, the format of this competition should also be of interest.

About forty percent of the book recognizes the work and accomplishments of coaches, students, and teams over the first twenty-five year history of the Minnesota Math League. Whether this would be of great interest to non-Minnesotans I will leave for each individual reader to judge.

I am grateful for the chance to read and review the book; however, I would have reservations about purchasing it.