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***"An Invitation to Mathematics"*,**
by Norman Gowar. Oxford University Press.
ISBN 0-19-853002-1.

Reviewed by Chan Sing Chun

The author tries to explain to the layman what mathematics is about. He said that it was a frequent disappointment and a continual puzzlement to mathematicians that so many people were put off the subject by an unfortunate experience at school or by the daunting appearance of written mathematics.

Let me quote "... An invitation should give an idea of what one is being invited to and at the same time suggest it is worth making the effort to attend. Any mathematician will tell you the party is well worth going to . ... the invitation is informative and attractive enough for you to take the step over the threshold and join in. . . ."

This book is an attempt to eradicate the fear that people have for mathematics. It has seven chapters and an index. A thin book of 206 pages. The topics I like best are: the proof of $\sqrt{2}$ is not a rational number, the golden ratio (or section), volume of a pyramid by limits, functions, linear programming, and the informal approach to the rates of change.

I am sure many of us will remember our good old school days when we learnt how to divide a given line segment AB at a point P so that $AB \cdot PB = AP^2$ using ruler and compasses. In fact we are dividing the line AB in the *golden ratio*. The ancient Greek mathematicians noticed that if the ratio of the length to the width of a rectangle is about 1.62 : 1 (the golden ratio) then the rectangle is aesthetically the most pleasing.

Take a look at these two pictures:

Which one [Fig.(i) or Fig. (ii)] has an aesthetic appearance? Surely it's Fig.(i), because the boat is on a line through P (the golden section of the line AB). The author has an interesting way of deriving the golden ratio $\frac{1}{2}(\sqrt{5} + 1)$ or $\frac{1}{2}(\sqrt{5} - 1)$ in this book. I am not revealing it. Get the book and see how the golden section is derived.

Anyway you will find other topics that interest you. Get this book and read it.

By the way the author Norman Gowar was a founder member of the Mathematics Faculty of the Open University, U.K.

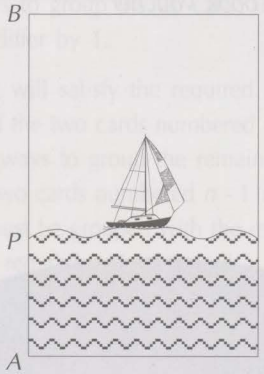

Fig (i)

$AB = 1$ *unit*

$BP = \frac{1}{2}(\sqrt{5} - 1) \cong 0.62$ *unit*

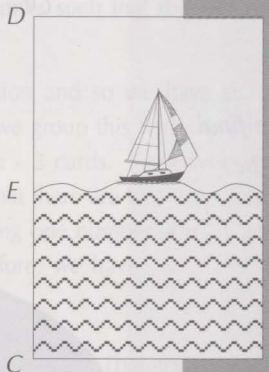

Fig (ii)

$CD = 1$ *unit*

$DE = 0.5$ *unit*