

Learning a subject such as mathematics via formula after formula, theorem after theorem, exercise after exercise, may not be the right way to introduce one to the interesting and exciting world of mathematics. One way to get people interested in mathematics may be to invite them to solve mind-boggling mathematical problems. In this issue you will find some challenging problems, new and old, together with solutions, in the articles "Problem Solving Frogs" and "Working Backwards". And "Competition Corner", a new column, is for those of you who hunger for more problems.

An important lesson to be learned from solving specific problems is to recognise and realise the potential of these specific techniques for a wider class of problems or situations. The next natural step would be to introduce general formulations which should be tested for validity and eventually justified with proofs. In this respect the study of mathematics is just like the study of other disciplines in science, which involves the process of making experiments, collecting data and drawing conclusions, and finally, proposing a general theory.

There's a lot more to learn about counting in the fifth instalment of the series "Counting"; "Sketching the cubic curves" is based on a project done by secondary school students; and the mathematician featured in this issue is a house-hold name. If you have been taking the operations $+$, $-$, \times , \div for granted, then find out what's to be offered in "Why "BODMAS"?". Last but not least, we continue with one of our book reviews in "From the shelves of the National Library ...". We believe that one way to better oneself in a subject is to read up more and more on the subject. While mathematics books of general interest are not readily available in local book stores, the National Library and all its branches have a wealth of such books. We hope that you will be making your way to the National Library soon.

Once again, we look forward to your contributions, suggestions and support. Happy Reading!

.....*Editorial*



MESSAGE

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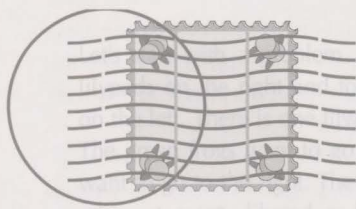
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Letters to the Editor

Geometry Corner

I have recently received the very interesting Sept. 1996 issue of *Mathematical Medley*. To my taste it is good to see so much space devoted to geometrical topics!

One point I would like to make about the article on Menelaus's Theorem. At the risk of appearing pedantic, I would prefer to see the r.h.s. quoted — as it always was when I first learnt the theorem — as -1 . This will distinguish it from Ceva's Theorem where the product is always $+1$. This is important, e.g., in the proof of Desargue's Theorem, as the r.h.s.'s give us $-1 \times -1 \times -1 = -1$, so that we can correctly deduce collinearity.

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In search of problems

From a friend I received one free copy of your publication *Mathematical Medley*. When leafing through the pages I found it is worth browsing and *Mathematical Medley* is an attractively presented magazine. You should know that I'm the Editor of diverse sections in the German mathematical journal *alpha* (for example *The Problem Corner*, *Mathematical Toolchest*). I believe a problem department is the cornerstone of every magazine which takes a pride in itself. The following metaphor is particularly appropriate: "A mathematical problem is a jackpot which gains in value as more of us throw our quarters into it."

Therefore I'm a restless scout for such *quarters* and so I'm stalking throughout the world for new ideas to be of interest to my corners in *alpha*. The responsibilities of conducting a corner naturally involves looking out the way other societies are doing Mathematics and/or are nurturing their young mathematically talented students - because it's a good cause. Needless to say that I'm an ardent collector of problems. So let me come to the point.

First I would like to subscribe to *Mathematical Medley*, and second, I want to order one copy of the book *Challenging Problems in Mathematics*, published by the Singapore Mathematical Society.

Last but not least: Is it possible to get the problems/solutions of the Singapore Mathematical Olympiad?

Do keep in touch!

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