

# The Mathematical Gazette

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## Editorial

### *Who understands percentages?*

One of our 'quality' newspapers recently published an article explaining how the government could claim it was spending more on education while schools seem short of resources. It argued the case for comparing the increase in spending with rising costs in education, rather than with the Retail Price Index. The article did not convince all readers and one wrote in:

'In her eagerness to knock the Government Fran Abrams gets into great detail but misses the most basic sum. Expressing spending in "real terms", after factoring out RPI, is the fairest common currency. The figures show education spending up by an impressive 50 per cent. If teachers have nabbed 38 per cent they can hardly complain that only 12 per cent is left for books, equipment and maintenance.'

In all schools, teachers' pay accounts for a high proportion of the expenditure. If we imagine a school where the budget is £1 million, the teachers pay might account for £800,000. Giving 50% more money to schools but paying the teachers only 38% more would increase the budget for other purposes from £200,000 to £396,000. Perhaps we should be investigating how this 98% increase in funds for 'books, equipment and maintenance' has been squandered.

### *New feature*

Two articles in this issue have been put in a section called Matters for Debate. I am aware that this is not a very imaginative title, but it serves to identify articles which call for some response. Ronald Brown and Timothy Porter discuss how mathematics gets done. Tony Gardiner raises some issues which should concern everyone in mathematics education. Whether you believe strongly in a different point of view, or wish to support the ideas presented, please feel welcome to respond. Short responses and longer articles that add to the debate will be published in future issues.

### *Questionnaire*

In the last issue I asked readers to return a questionnaire. Around 350 have done so, many taking the trouble to write additional comments, all of which have been read. I have analysed some of the results and can give some provisional findings. One thing I learned is that questionnaire design is harder than it looks. Several readers quite clearly used the 'level of agreement' numbers

in the opposite way to that intended!

The majority of readers (61% of the first 210 responses) are teachers and lecturers; another 34% are retired, mostly from jobs in education. About one in eight of the responses were from women and the mean age of the respondents was 56. Perhaps retired people have more time to fill in questionnaires!

About half of those respondents with educational connections are in schools, 14% are in further education and the rest are at universities or teacher training institutions. Most respondents have a degree level qualification (82%) and half of them have a higher degree. With this background it is not surprising that most agree with the statement 'I can understand most articles if I make the effort'. Of course, few articles can be read without effort!

I was particularly interested in the response to the statements 'There should be more elementary material' and 'More of the *Gazette* should be aimed at students'. Of 92 replies, 15 supported both statements, 28 were against both and 19 were neutral. I will endeavour to have a few 'accessible' articles or notes each issue, without changing the essential nature of the *Gazette*. Several people made the point that many recent articles and notes have been 'student friendly'. Indeed, two of the notes in this issue were written by students: Konstantin Ardakov wrote his 'cubics' program having seen a copy of E. A. Pritchard's note, while Ian Ward's note is a shortened form of an A level investigation. Neither will claim to have discovered any major new truths, but this is not the point. Hopefully their efforts will be found useful by some readers and will encourage others to write notes.

The idea of having more expository articles, helping readers to stay in touch with the frontiers of the subject was well supported. The main difficulty here is in persuading those capable of writing such articles to come forward. However, there will be a collection of expository pieces in the March 1996 issue, in which we celebrate the *Gazette* centenary.

### *Centenary*

*The Mathematical Gazette* first appeared as an irregular quarto journal in 1894. The early volumes spanned more than one year, so we have only reached Volume 79. We are celebrating the centenary in 1996 for two reasons. One is that the first regular volume appeared (in octavo) in 1896, and this marks the beginning of the *Gazette* in its present form. The other reason is more practical: 1994 coincided with Nick MacKinnon's last year of the editorship, and he was unable to take on the extra work involved.

The centenary edition will contain a number of articles looking back at the mathematics of the twentieth century. Authors include Sir Michael Atiyah, Ian Stewart, Jean Dieudonné, D. V. Lindley and Peter Shiu. There will also be articles on the teaching of mathematics, with more emphasis on what we might do next century. The authors here include Geoffrey Howson, Nick MacKinnon and John Hersee. The 'Notes' will feature some familiar contributors and there will be some memories from people with *Gazette* or Association links, such as Sir William McCrea, Lady Jeffries, Peter Reynolds, Geoffrey Matthews and A. R. Pargeter. However, first enjoy this issue!

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