

owes to those members – names such as Broadbent, Kellaway, Langford, Snell, Parsons, Maxwell, Combridge come quickly to mind – who got the Association moving again in the years after 1945. Amongst these, none stands taller than Walter Langford.

References

In the preceding tribute I have drawn heavily on the research of Mike Price summarised in his history of the Association, *Mathematics for the Multitude*. Langford's career can also be traced through the following contributions to the *Gazette*:

- 13, (no. 185, December 1926), pp. 230-231. Report of a British Association meeting.
- 13, (no. 191, December 1927), pp. 456-457. A note on angle trisection.
- 21, (no. 246, November 1937), pp. 329-337. Address to the British Association on algebra.
- 32, (no. 301, October 1948), pp. 240-243. Discussion on mathematics in examinations.
- 42, (no. 341, October 1958), pp. 177-193. Presidential Address.
- 48, (no. 364, May 1964), pp. 131-136. Tribute to E. H. Neville.

DOUGLAS QUADLING

12 Archway Court, Barton Road, Cambridge CB3 9LH

Correspondence

DEAR EDITOR,

The list printed on page 125 of the *Mathematical Gazette*, March 1997 is not of values of n such that $10n + 1$, $10n + 3$, $10n + 7$, $10n + 9$ and $10n + 13$ are all prime. It is a list of values of n such that $10n + 1$, $10n + 3$, $10n + 7$ and $10n + 9$ are all prime.

The corresponding list of values of n such that $10n + 1$, $10n + 3$, $10n + 7$, $10n + 9$ and $10n + 13$ are all prime is as follows

1	1606	2227	14416	19573	24760	34798	46516
10	1942	4378	16570	20182	26881	36121	
148	2101	5533	16684	22534	32614	39775	

Yours sincerely,

D. M. HALLOWES

17 St Albans Road, Halifax HX3 0ND

Editor's Note: J. R. Gosselin of the Royal Military College of Canada has written to make the same point. He also points out that the value $n = 6949$ should have been included in the previous list (on page 125 of the *Mathematical Gazette*, March 1997) since 69491, 69493, 69497 and 69499 are all primes.

DEAR EDITOR,

The work on cubics, complex roots, tangents and chords in Colin Dixon's Note 79.25 and at the end of Andrew Jobbings's Note 79.26 in the July 1995 *Gazette* can be developed to give a graphical method for determining the *complex* roots of a (real) cubic. This was done in my solution to Problem 66.E published in the *Gazette* of March 1983, page 60.

Yours sincerely,

FRANK GERRISH

43 Roman's Way, Pyrford, Woking, Surrey GU22 8TR

DEAR EDITOR,

I regret to have to inform you that the value of $p(10^6)$ given in my article 'Computation of the partition function' in the March 1997 issue of the *Gazette* is too small by 58. Thus, the last three digits of the enormous number that was given should be 818 instead of 760. I do not wish to put the blame for my own misfortune on someone else, but it is useful to report on the investigation on how such an error came about, because it may have other implications.

I discovered that the computer algebra package that I was using, namely *Mathematica*, was not as robust/reliable as I had thought it was. Putting it kindly, 'extreme care' is required when performing arithmetic on large real numbers using *Mathematica*. The latest Version 3.0 is an improvement, but there are still 'problems'. Let us set, for example,

$$a = N[10^{24}, 30], \quad b = N[10^{10}, 16],$$

which, in the language of *Mathematica*, are the real numbers 10^{24} and 10^{10} with the specified accuracy of 30 and 16 significant figures, respectively. One would expect that there is no problem in asking for the integer part of $a + b$, but *Mathematica* returns the value 1000000000000010049552384, which is obviously wrong. It does return the correct value 10000000000000100000000000 if we replace 16 by 17 in the above. It appears that a is an arbitrary precision number with assigned precision, whereas b (when set at 'precision 16') is only a machine precision number, and that, instead of 'promoting' the latter to an arbitrary precision number for the calculation of $a + b$, the number a is 'polluted' to a machine precision number. When asked for the integer part it now attaches some 'garbage' digits obtained from converting a binary machine number to an arbitrary length decimal integer. The worst aspect of all this is that *Mathematica* does not give any warning before, during or after such calculations.

I also take this opportunity to correct two misprints in the article. The condition $0 < k \leq h$ for the sum defining $A_k(n)$ should read $0 < h \leq k$, and, later, v in its definition should be v^2 instead.

Yours sincerely,

PETER SHIU

Dept. of Math. Sci., Loughborough University, Leicestershire LE11 3TU