Corollary: Let a, b, m and n be positive real numbers. Then

$$(ma + nb)(mb + na) \geqslant (m + n)^2 ab.$$

Acknowledgement: We would like to thank the referee for helping to improve this paper.

References

1. Problem 3, LII Olimpiada Matemática Española, Melilla, 18, January, 2016.
2. Roger B. Nelsen, Proof without words: the sum of a positive number and its reciprocal is at least two (four proofs), *Math. Magazine*, **67**(5) (1994) p. 374.
3. Roger B. Nelsen, Proof without words: exercises in visual thinking, *The Mathematical Association of America* (1993).

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100.40 The *Mathematical Gazette*, 100 not out

This Note is the final one in the final issue of Volume 100. It seems appropriate to mark this achievement in some way. So the Association has completed 100 volumes but, in reality, there have been 101 volumes! How can that be? Surely mathematicians can at least count to 100. The explanation is that the first six issues had a larger page size and that set of six comprises Volume 0.

Be that as it may, the first issue of *The Mathematical Gazette* appeared in April 1894. It consisted of eight pages and was priced 6d (= $2\frac{1}{2}$ pence). The first item was 'On the Eccentric Circle of Boscovitch', written by the Editor, E. M. Langley. Other items in this issue were: 'Greek Geometers before Euclid'; and 'Approximations and Reductions'. None of these were finished in Issue 1; cliff-hanging was the name of the game. The *Gazette* has now reached Issue 549. I shall not describe them all! The rest of the issues in Volume 0 were published in July and December 1894 and then in February, May and October 1895 and totalled 60 pages. Volume 1, with the same sort of page size that we now have, was made up of 18 issues which appeared at intervals throughout 1896, 1897, 1898, 1899 and 1900. The 18 issues contained a very respectable 422 pages. It must have been quite a challenge for the team to decide what to do and when to do it! I wonder if they ever considered the *Gazette* would still be going strong 100 volumes later! The table below summarises the publication of the *Gazette*. In case this table is unclear, it is in blocks of 4 rows in which are volume numbers (in bold), the years, the issues (in italics) and then the number of pages in each volume.

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0	**1**	**2**	**3**	**4**	**5**	**6**
1894-1895	1896–1900	1901–1904	1904-1906	1907-1908	1909-1911	1911-1912
1–6	*7–24*	*25-43*	*44-60*	*61-76*	*77-90*	*91-101*
60	422	396	408	400	400	406
7	**8**	**9**	**10**	**11**	**12**	**13**
1913-1914	1915-1916	1917-1919	1920-1921	1922-1923	1924-1925	1926-1927
102-114	*115-126*	*127-143*	*144-155*	*156-167*	*168-179*	*180-191*
436	340	424	384	436	524	468
14	**15**	**16**	**17**	**18**	**19**	**20**
1928-1929	1930-1931	1932	1933	1934	1935	1936
192-204	*205-216*	*217-221*	*222-226*	*227-231*	*232-236*	*237-241*
588	508	368	352	360	384	360
21	**22**	**23**	**24**	**25**	**26**	**27**
1937	1938	1939	1940	1941	1942	1943
242-247	*248-252*	*253-257*	*258-262*	*263-267*	*268-272*	*273-277*
452	528	496	368	328	244	228
28	**29**	**30**	**31**	**32**	**33**	**34**
1944	1945	1946	1947	1948	1949	1950
278-282	*283-287*	*288-292*	*293-297*	*298-302*	*303-306*	*307-310*
228	244	312	320	320	320	320
35	**36**	**37**	**38**	**39**	**40**	**41**
1951	1952	1953	1954	1955	1956	1957
311-314	*315-318*	*319-322*	*323-326*	*327-330*	*331-334*	*335-338*
304	320	320	328	352	320	320
42	**43**	**44**	**45**	**46**	**47**	**48**
1958	1959	1960	1961	1962	1963	1964
339-342	*343-346*	*347-350*	*351-354*	*355-358*	*359-362*	*363-366*
336	320	318	381	364	366	484
49	**50**	**51**	**52**	**53**	**54**	**55**
1965	1966	1967	1968	1969	1970	1971
367-370	*371-374*	*375-378*	*379-382*	*383-386*	*387-390*	*391-394*
488	454	380	436	460	440	490
56	**57**	**58**	**59**	**60**	**61**	**62**
1972	1973	1974	1975	1976	1977	1978
395-398	*399-402*	*403-406*	*407-410*	*411-414*	*415-418*	*419-422*
364	364	320	300	320	316	308
63	**64**	**65**	**66**	**67**	**68**	**69**
1979	1980	1981	1982	1983	1984	1985
423-426	*427-430*	*431-434*	*435-438*	*439-442*	*443-446*	*447-450*
288	306	318	344	322	322	321
70	**71**	**72**	**73**	**74**	**75**	**76**
1986	1987	1988	1989	1990	1991	1992
451-454	*455-458*	*459-462*	*463-466*	*467-470*	*471-474*	*475-477*
333	358	348	368	422	500	460
77	**78**	**79**	**80**	**81**	**82**	**83**

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1993	1994	1995	1996	1997	1998	1999
478-480	*481-483*	*484-486*	*487–489*	*490–492*	*493–495*	*496–498*
408	374	640	640	512	544	576
84	**85**	**86**	**87**	**88**	**89**	**90**
2000	2001	2002	2003	2004	2005	2006
499–501	*502-504*	*505- 507*	*508-510*	*511-513*	*514-516*	*517-519*
576	576	576	608	608	576	576
91	**92**	**93**	**94**	**95**	**96**	**97**
2007	2008	2009	2010	2011	2012	2013
520-522	*523-525*	*526-527*	*529-531*	*532-534*	*535-537*	*538-540*
576	592	576	576	576	576	576
98	**99**	**100**				
2014	2015	2016				
541-543	*544- 546*	*547-549*				
576	576	576				

I find these numbers to be very interesting. Quite clearly in the early years, the format of the *Gazette* was still under review and, up until 1932, there were at least six issues per year with around 30 to 40 pages per issue. Scheduling must have been quite a headache and, of course, these data show only when they were supposed to be issued. In many ways, the modern format begins in 1932 with a volume being the issues in a calendar year. Initially there were five per year, changing to four per year in 1949 and to the present three per year in 1992. It was around 1992 that the colour images first appeared on the front cover.

There are no gaps in the *Gazette*. Even during hard economic times and two world wars, the *Gazette* appeared although during World War 2 the number of pages was smaller and there was a slight reduction in page size.

It is natural to ask "What is the total number of pages?" A precise answer is difficult to define as sometimes pages with adverts were not numbered. However, the total number in the rows = 0 (mod 4) is 41 981.

During its existence, the *Gazette* has been fortunate to have been in the hands of splendid Editors. The first few are somewhat unclear but this is how it looks:

Issues	Editors		
1 to 24	E M Langley and others	395 to 426	D A Quadling
25 to 208	W J Greenstreet	427 to 467	V W Bryant
209 to 330	T A A Broadbent	468 to 483	N MacKinnon
331 to 346	R L Goodstein	484 to 505	S Abbott
347 to 394	E A Maxwell	506 to 549…	G Leversha

All of these made a great contribution with Greenstreet way ahead using the number of issues as a metric but in terms of pages?

So, where are we now and where are we going? I can find no sign of any commemoration of 50 years of the *Gazette* but, if there was one, it

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might have been rash to suggest that readers looked back at early issues. Whilst there were, and still are, complete runs of the *Gazette* in university libraries as well as our splendidly bound set in Headquarters, these might have been difficult to access. However, things are different now. I can invite you to have a look at 'On the Eccentric Circle of Boscovitch' and via the internet you can do it. There are two electronic archives, one with JSTOR and one with Cambridge Journals Online which, for a modest fee or via an academic instiution, are easy to access. Who can say how readers will access the *Gazette* in 50 or 100 years from now? I certainly cannot!



The Headquarters bound set of Gazettes with Volume 0 at the top left

Finally, I would like to add a brief personal comment. I became involved with *Gazette* work for Issue 484 which was March 1995. Steve Abbott was appointed as Editor by David Bain, the then MA Editor-in-Chief, and I was invited to get typesetting! So I set to and have processed 22 volumes or 66 issues or 12 784 pages, which is quite a lot and I very much hope to continue working with Gerry to produce a lot more. I hope you will be pleased to hear that we are well on with March 2017.

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