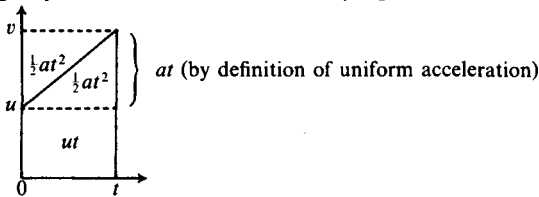


Correspondence

Uniform acceleration

DEAR EDITOR,

I was interested in Note 69.35 in the December 1985 *Gazette*. It has always seemed obvious to me—and I have always emphasised in teaching—that the *five* quantities u , v , a , s , t are connected by five equations, each of which omits one of the quantities in turn: so that to solve a simple problem in uniform acceleration, one lists the given quantities (of which there will be 3) together with the one required, and then chooses the equation which omits the fifth. Beginners waste much time in wondering which equation to use, and often use two, calculating and substituting the unwanted unknown, when the correct choice would have holed out in one. It is true that $s = vt - \frac{1}{2}at^2$ is probably the least useful of the five in practice, but this is no reason for despising it and so destroying the symmetry of the system. Incidentally if one uses a graphical rather than a calculus approach to the proofs, $s = ut + \frac{1}{2}at^2$ and $s = vt - \frac{1}{2}at^2$ are equally obvious in terms of areas, as is $s = \frac{u+v}{2} \cdot t$, leaving only $v^2 - u^2 = 2as$ to be obtained by algebraic elimination.



Yours sincerely,
A. ROBERT PARGFTER

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Reviews

Arithmetic for you, by Caroline Paechter. Pp 191. £3.50. 1985. ISBN 0-09-161271-3. (Hutchinson)

Despite the emphasis in the title this is a book covering a mathematics course for low ability fourth formers—fractions, decimals, percentage, measurement (metric and imperial), area, nets, geometry of simple shapes, simple statistics, coordinates, simple algebra, and averages but not sets. On first reading I assumed it had been written for first year pupils of average ability because the style would seem to appeal to that age group. The content is almost entirely traditional although some attempt has been made to present it in an attractive manner. Style apart it is not clear what is being given to these pupils that they have not already failed at several times already.

The printing is nicely done with the pleasant black print broken up with red titles and instructions. Every few pages there is a little cartoon to brighten the day and this works quite well. Answers are included and I believe this to be a correct policy. Those who disagree can cut them out. There are occasional tests but I would have preferred not to have the answers to these. Groups of problems for tests and homeworks without answers would be useful in a book of this nature. The material is broken down into eight sections although there does not seem to be a theme within each section, the role being to break down the succession of exercises into manageable groups. Each exercise is preceded by examples. The author has managed to arrange that not all the interesting mathematics is done by white, middle class boys and this must be welcomed.