

MATHEMATICAL ASSOCIATION



supporting mathematics in education

Review

Source: *The Mathematical Gazette*, Vol. 6, No. 92 (May, 1911), p. 96

Published by: Mathematical Association

Stable URL: <http://www.jstor.org/stable/3603361>

Accessed: 27-01-2016 08:39 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Mathematical Association is collaborating with JSTOR to digitize, preserve and extend access to *The Mathematical Gazette*.

<http://www.jstor.org>

Civil Service Test Papers in Mathematics with Answers. By A. F. VAN DER HEYDEN. Pp. 118. Middlesborough: Appleyard & Sons. 1910. Price 3s. 6d.

A collection of 315 questions, of the type rendered familiar by Mathematics I. in Army examinations, and the examinations for second division clerkships. Of the questions 224 are original, and the remainder are from recent examinations. Some of the questions are very neat, particularly one on Peaucellier's linkage (p. 34). At p. 43 it is not quite clear how much steel there is in the structure, nor what it cost. The arrangement and general style of the questions should render the book well suited for use by candidates preparing for examinations of the kind mentioned.

Solid Geometry. By C. GODFREY and A. W. SIDDONS. Pp. 109. Cambridge: University Press. 1911. Price 1s. 6d.

If we compare the abandonment of Euclid to the escape out of Egypt, most teachers would acknowledge, and the authors would probably be among the first to agree with them, that we are still wandering in the wilderness. The decision of many questions must await the result of patient investigation, in which due account will be taken of the natural development of the growing intellect, of the practical conditions and limitations of the schoolroom, and of the modifications of scientific opinion. For instance, since a beginner's first acquaintance with geometrical notions must necessarily be derived from solid objects it would seem that the Italian school of Fusionists,* who would treat plane and solid geometry together from the start, must be seriously reckoned with. At present, however, a growing opinion that solid geometry calls for increased attention is as much as can be counted upon. Hence we find proposals to demand merely an acquaintance with the forms of the simpler solids, or to follow a course of plane geometry with a modified version of the eleventh book, or with a scheme based on the practical applications of descriptive (Mongian) geometry, or with a sketch of modern projective methods. Under these circumstances the authors have probably been judicious in writing themselves down eclectic, giving brief sketches of several topics, and leaving considerable latitude to the teacher, who will find well chosen and well ordered materials for whichever of these alternatives he may prefer.

A feature, which those who know the earlier works by the authors will expect, is a large number of well-chosen, easy and well-arranged examples. One matter seems to invite discussion. In notes at several places in the text the authors recommend dealing with *numerical* examples by "rough sketch" rather than "accurate drawing," and justify themselves in the preface thus:

"If the aim is educational rather than technical, very accurate drawing is hardly necessary; whatever educational benefit is to be gained from drawing accurately has presumably been gained during the earlier study of plane geometry. But it must be remembered that in some cases a fair degree of accuracy is needed to reveal the essentials, *e.g.* there are often cases of concurrency or collinearity the failure of which would wreck the figure."

Now, it may be at once admitted that in matters educational there are so many considerations to be had in mind that there may be a great deal of sound common-sense in the assertion, and in the denial, of a bare principle. Moreover, anyone acquainted with the ways of professional draughtsmen will notice that some of them show more skill in concealing mistakes than in avoiding them. But it does seem that an exactly opposite argument of some cogency might be framed as follows:

If the pupil has gained any educational benefit from his early study of the use of instruments he will realise the value of a neatly drawn diagram, and will have very little trouble in constructing one. Moreover, in descriptive geometry it is so generally possible to check the work by drawing one checking line, that accurate figures are of peculiar importance. Professor Klein has observed that a time may come when we shall put correct drawing on a level with correct computation.

The authors have produced in an unpretending form some excellent material, and have in many of the exercises combined very happily a demand for space intuition, and for some power of Euclidean reasoning.

*The treatise of Professor Lazzari and Bassani has recently been translated into German by Herr Tröutlein.