

Mathematiques: Tome I - Éléments de calcul différentiel et intégral, by A. Hocquenghem and P. Jaffard. Masson et Cie, 1962. x + 515 pages. 36 NF.

The five-hundred-odd pages of this volume contain a vast amount of material - the whole of the elementary calculus; with a whole chapter on numerical computation starting in true modern fashion with the idea of a programme; a full treatment of vectors; and a very full treatment of what used to be called "curve-tracing", is really the beginnings of differential geometry, and here is subsumed under "Éléments de géométrie analytique". A good point is that the use of the integral to find such geometrical entities as volume is postponed until the geometrical foundations have been laid.

From the theoretical view-point, the book has one or two failings. It is hard to see the point of assuming without proof the theorem about a function continuous on a closed interval taking all intermediate values, while giving (later) a detailed proof of theorems about the limits of sums, products, and quotients. The definition of differential is incomplete and that of tangent is illogical (it is defined in terms of co-ordinates and is not shown to be a geometrical invariant). Provided that the book is not made to serve where a text-book of analysis would be appropriate, these defects detract very little from the value of the book.

H. A. Thurston, University of British Columbia

Geometric Transformations, by I. M. Yaglom. Translation by Allen Shields. Random House, 1962. 133 pages. \$1.95.

This book is the eighth of the New Mathematical Library series, published by Random House and the L. W. Singer Company for the Monograph Project of the School Mathematics Study Group, whose activities are aimed at the improvement of teaching of secondary school mathematics. This volume is Part I of the Russian original, Geometric Transformations, which was published in three parts (Parts I and II in 1955; Part III in 1956).

Part I deals with the fundamental transformations of plane geometry, i. e., the Euclidean group of the plane. A short basic text consisting of an introduction and two chapters is supplemented by 47 rather difficult problems which are solved by the use of isometries. The approach is intuitive, since the book is intended for a fairly wide class of readers (including bright high school students). The notion of