

cally, and a generalization of Cavalieri's principle is proved; space integrals, introduced as linear functionals invariant under translation, monotonic and normalized, are expressed as iterated simple integrals and the transformation formula is proved. Finally surface integrals, as preparation for Chapter XII: Gauss' Integral theorem and the general formula of Stokes.

From this account it may be seen that the present work is not an ordinary text-book on calculus. It contains in a relatively small space an extraordinary amount of material and should be of interest to everybody teaching analysis on a higher level. It presents rigorous proofs for many theorems of fundamental nature which are often settled by referring to physical intuition or proved by using sloppy argument.

Although the text contains a number of illustrating examples which should help the reader to understand the preceding theory, there are no exercises on which he could test his ability. In return for this there are the introductory remarks at the beginnings of the chapters stating clearly the aims of the subsequent development.

The translation is in general satisfactory; occasional unidiomatic expressions (e. g. "differential quotient", "monotonical" etc.) should not constitute a difficulty for any reader.

Hanna and Hans Schwerdtfeger, McGill University

Generators and Relations for Discrete Groups, by H. S. M. Coxeter and W. O. J. Moser. Second Edition. *Ergebnisse der Mathematik, Neue Folge, Band 14.* Springer Verlag, Berlin, 1965. ix + 161 pages. Price D. M. 32. 00.

The original purpose of this book was to provide a list of abstract definitions by relations between generators for all finitely generated groups which might occur as examples in group-theoretical investigations. Evidently the first edition proved to be extremely useful. So will the new edition continue to be helpful to all those who, like Hilbert expect progress from the insight into a large number of special cases.

Apart from minor corrections throughout the text, the new edition differs from the first one by a more complete description of the binary polyhedral group (§ 6.5) and of the recent progress on the Burnside problem (§ 6.8); a new presentation is given for the groups $GL(2, p)$, $PGL(2, p)$, M_{11} , M_{12} .

A detailed review has been published in the *Bulletin of the American Mathematical Society*, Vol. 64, No. 3, 1, pp. 106-108. For the newcomer to the work we list the chapter headings: 1. Caylic, Cyclic and Metacyclic Groups. 2. Systematic Enumeration of Cosets.

3. Graphs, Maps and Cayley Diagrams. 4. Abstract Crystallography.
5. Hyperbolic Tessellations and Fundamental Groups. 6. The Symmetric,
Alternating, and other Special Groups. 7. Modular and Linear Fractional
Groups. 8. Regular Maps. 9. Groups Generated by Reflections. -
Tables. Bibliography. Index.

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The following books have been received by the editor. It is
regretted that a detailed review on these cannot be published:

Bulletin: de l'Institut International de Statistique. Actes de la
34^e Session, Vol. XL. Ottawa 1963. 1. Livraison, 2. Livraison.

Ed: H. Busemann, Editor: Advances in Mathematics. Vol. 1,
Fasc. 2. Academic Press, 111 Fifth Avenue, N.Y. 10003. 1965. \$5.50.

E. A. Cameron: Algebra and Trigonometry, Revised Edition.
1k + 338 pages. Holt Rinehart and Winston, New York, 1965. \$8.25.

R. Campbell and G. Reeb: Formulaire de Mathematiques.
Fasc. IV. Equations differentielles. Centre Nationale de Recherche
Scientifique, 15 Quai Anatole, Paris VII^e, France. 1964.

E. J. Cogan and R. Z. Norman: Handbook of Calculus, Difference
and Differential Equations. Second Edition. Prentice Hall Inc.,
Englewood Cliffs, N.J. 1963. xii + 175 pages. \$1.95.

P. H. Cootner: The Random Character of Stock Market Prices.
General Publishing Co., 200 Adelaide St. W., Toronto. 1964. \$16.50.

St. Drobot (Ed.): Mathematical Models on Physical Sciences.
Proc. Conference at University of Notre Dame, 1962. Prentice-Hall Inc.,
New Jersey, 1963. viii + 193 pages.

C. E. Easthope: Three-dimensional dynamics of vectorial treat-
ment. 2nd ed. Butterworth and Co. (Canada), Toronto. xi + 412 pages.
\$16.50.

A. I. Gubanov: Quantum Electron Theory of Amorphous Conductors.
English translation by A. Tybulewicz, Consultants Bureau, New York,
1965. xv + 277 pages. \$17.50.

A. G. Hansen: Similarity analyses of Boundary Value Problems
in Engineering. Prentice-Hall Publ. Inc., Englewood Cliffs, N.J.
1964. xiv + 114 pages. \$6.75.

W. E. Hartnett: An introduction to the fundamental concepts of
analysis. J. Wiley and Sons Inc. N.Y. 1964. xiv + 154 pages. \$6.95.