33[10, 11].—C. J. BOUWKAMP, *Catalogue of Solutions of the Rectangular 3 × 4 × 5 Solid Pentomino Problem*, Technological University Eindhoven and Philips Research Laboratories, N. V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands, July 1967, 310 pp., 30 cm. One copy deposited in the UMT file.

In this remarkable document, which resembles a small town telephone directory both in size and composition, Professor Bouwkamp, who is more widely known for his contributions to electromagnetic theory, presents a catalog of the 3940 solutions which he and an assortment of computers succeeded in finding, over a period of several years, to the 3 × 4 × 5 solid pentomino problem, described by this reviewer [1].

Although the programming of two-dimensional problems, pioneered in 1958 by Dana Scott, has now become commonplace, with 2339 solutions to the 6 × 10 rectangle of (plane) pentominoes having been found independently by numerous investigators, this catalog appears to be the first publication to document the exhaustive computer search for the solutions of a three-dimensional problem.

In addition to the obvious contribution to polyominology, these methods should also be applicable to crystallography, organic chemistry, and other disciplines in which it is of interest to enumerate the possible ways in which a given set of three-dimensional building blocks can be fitted together.

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1. S. W. GOLOMB, *Polyominoes*, Charles Scribner's Sons, New York, 1965, pp. 116–118.

34[12].—JOHN M. BLATT, *Introduction to Fortran IV Programming*, Goodyear Publishing Co., Pacific Palisades, Calif., 1968, xi + 313 pp. Price $5.25.

By now there are various versions of Fortran IV—different dialects as it were. This particular text by John Blatt is geared specifically to users of computers using the IBM G-level Fortran IV, a language which is implemented in the student compiler WATFOR for the IBM 360.

Certain features will look unfamiliar to the seasoned programmer, but this textbook is not intended for him; it is aimed at the novice whose task is to learn the WATFOR version of Fortran IV in minimum time. From this point of view, the author succeeds admirably. In clear terms he covers each of the topics thoroughly and with pedagogic finesse. His text is abundant with good examples, well-documented and to the point, and each chapter contains a series of pertinent questions, the answers to which are also supplied.

Most textbooks on the subject would stop at this point, but John Blatt goes further. With customary thoroughness, the author expounds his philosophy on computers and languages and pinpoints the frequent inconsistencies in this field. Thus, in addition to supplying the beginning student with all the tools necessary

for learning efficiently, he also provides him with an up-to-date background on the state of the art so that, indeed, there would be little, if any, need to seek other supplementary material.

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35[12].—MARIO V. FARINA, *Programming in BASIC*, Prentiss-Hall, Inc., Englewood Cliffs, N. J., 1968, ix + 164 pp., 28 cm.

BASIC is the name of a programming language used on teletype consoles by students at Dartmouth College in time-sharing communication with the GE-265 and GE-645 computers. It does not have the flexibility of Fortran IV which it resembles in many ways, but what it lacks in repertoire it more than makes up for in terms of usefulness.

This text is an attempt to illustrate the BASIC language and it is to the credit of the author that he accomplishes his task magnificently. The book assumes no previous knowledge of either time-sharing features or programming know-how and, without realizing it, the reader is introduced to the language with ease and clear understanding.

On a recent visit to Dartmouth, I was told that it takes a student about two hours to learn BASIC. This may be somewhat of an exaggeration or may apply only to those specially gifted students we are used to seeing around computers nowadays. However, it takes only about two hours to get through Mr. Farina's book and it has the added advantage that if one has to learn BASIC one can enjoy it at the same time.

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36[12].—MARIO V. FARINA, *COBOL Simplified*, Prentiss-Hall, Inc., Englewood Cliffs, N. J., 1968, xii + 528 pp., 28 cm.

Once again Mario Farina has shown that all it takes to write a clear, meaningful and substantial textbook on a computer language, is a thorough understanding of the subject matter, a penchant for short, precise statements, a sensitive pedagogic technique plus a desire to patiently present the subject matter in a logical order and in a manner designed to inform the reader in the most palatable way possible.

COBOL *Simplified*, despite its 528 easy-to-read pages, is an excellent contribution to the literature. It will not appeal to the COBOL expert or to one who is searching for all manner of novel or exotic techniques. Instead, it is ideally suited for the serious beginning student and very little by way of prerequisites is expected of him.