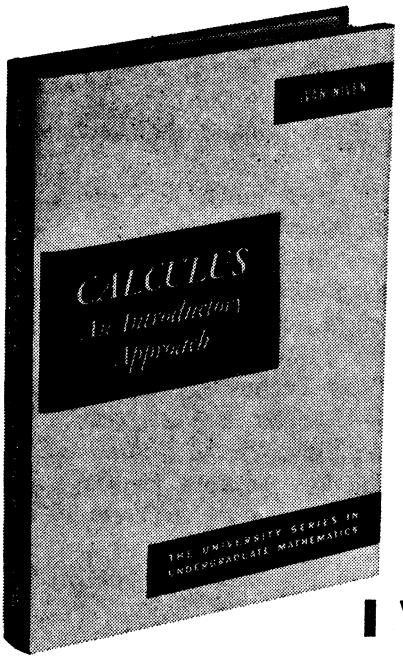

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During the last year, a series of mathematics programs has been in the process of development at the Britannica Center for Studies in Learning and Motivation. *The base of these operations has been Roanoke, Virginia, but as soon as the new laboratory building for the Center has been completed, the staff will move to its permanent location in Palo Alto, California. The purpose of this report is to inform professional people in the area of mathematics of the nature of the programmed instruction series and to invite their comments concerning the project.*

The process of programming: Many of you by this time have become familiar with such terms as "teaching machines," "programmed textbooks," etc. In programming material, the structure of a subject-matter area is broken down into small related parts. The student is systematically asked questions about each new piece of information he acquires, and is thus made an active part of the learning process. Material is programmed at the Encyclopaedia Britannica Films Center by subject-matter specialists working in conjunction with experimental psychologists. The material is programmed, tested by students, and then re-programmed and re-tested many times. [*For a more detailed discussion of programming, see Professor B. F. Skinner's incisive article, Teaching Machines; Science, 128, 969-977, (1958)*].

The programmers: Subject matter specialists were selected after consulting with the heads of the mathematics departments at Harvard, Yale, and Massachusetts Institute of Technology. They recommended a number of promising young men, and from this group the majority of the programmers were chosen. In addition, two programmers were selected on the basis of specific recommendations by professors from other institutions. We tried to choose subject-matter specialists who, in addition to being excellent mathematicians, also had had teaching experience with the particular course they were going to program, whether it be at the high school or the university level.

We would like at this time to express our appreciation to the eminent mathematicians who assisted us in the selection of our programmers. The selection of the subject-matter specialists is undoubtedly the key factor in the success of any programming operation and without their expert advice, our project would have been severely handicapped.

The subject matter: *High School Courses*—In order to determine what high school sequence should be programmed, the state departments of education of all of the states were consulted. From state curriculum guides, material was prepared. *(This consultation included a conference which was attended by representatives of thirty-eight states.)*

Consultants: A large number of mathematicians consulted with us during the development of the programs. Among these were the directors of two of the principal modern mathematics projects in the United States, and in this regard we wish to make a point about the nature of the material in our high school mathematics programs.

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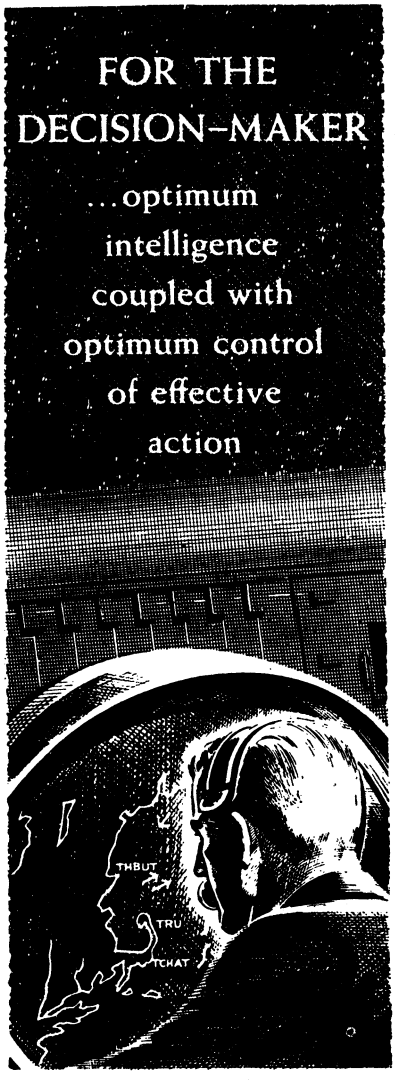

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