of mathematics achievement. This advantage was slight and the number of students involved was small. It might be argued that, at the junior high school level, teachers and textbook writers should constantly search for better ways of making the presentation of mathematics ideas as simple as possible. It would appear, for example, that reading difficulties and vague verbalizations should not be allowed to interfere with the acquisition of fundamental ideas in mathematics, that examples should be most carefully selected to promote pupil discovery of significant mathematical principles and relationships, and that a variety of problem situations should be provided to enable students to appreciate the significance of the ideas included in the program.

GUIDELINES FOR REVISED JUNIOR HIGH SCHOOL MATHEMATICS CURRICULUM

Editor's Note: A bulletin has been prepared by the Junior High School Mathematics Subcommittee designed to assist teachers and administrators in providing a more suitable program for students who have completed the STA course. The procedures outlined are considered beneficial for students who have followed other programs as well. Junior and senior high mathematics teachers will find it especially enlightening insofar as considerable information is given as to content of the new junior high school curriculum. The material suggests procedures for use of the Winston Text from a "modern" point of view, outlines a unit on numbers and gives an excellent annotated bibliography. Below is the text of the final section on the guidelines for the revised junior high school mathematics section, together with a skeletal bibliography provided by the subcommittee for those who would care to investigate further on their own.

These guidelines regarding content for revised junior high school mathematics curriculum were prepared by the Junior High School Mathematics Subcommittee, April, 1962.

1. Sets - The concept of sets should permeate the course wherever

applicable, that is, wherever the use of set terminology and set operations clarify or simplify the presentation of a concept.

2. Numeration Systems - A discussion of numeration systems to other bases gives students a greater understanding of the base-10 system, develops an appreciation of the history of number development and provides exercises that challenge the mind and imagination of students. For the above reason the inclusion of the topic of numeration systems is considered desirable. The development computational facility in other bases should be regarded as enrichment which can be deleted without interfering with the continuity of the course.

3. Geometry - The point set approach is considered to be acceptable. The study of geometry at the junior high school level will continue to include an intuitive development of basic geometric relationships.

4. Number Systems - The study of the elements, operations and laws of operation of the natural, rational, integral, and real number systems is judged to be desirable to generalize or systematize arithmetic operations with whole numbers and fractions and to give meaning to algebraic operations.

5. Problem Solving - Problem solving is considered to be an important aspect of the curriculum. An approach is favored which stresses: (a) the statement of the problem situation in the form of a mathematical sentence followed by computation and then an interpretation relating the answer to the original problem situation; (b) the use of a ratio or a rate-pair approach to all problems to which it can be applied; (c) problems involving inequalities as well as problems involving equations; and (d) solution procedures which include graphing.

6. Measurement - The topic is judged to be an important one for junior high school mathematics. Some emphasis on the process of measurement is desirable.

7. Logic - If algebraic or geometric proof is introduced towards the end of the junior high school, it is considered desirable to precede

such a section by a brief treatment of strategies useful in proving a statement.

8. Permutation, Combination, Probability, Statistics, and Series - A very brief intuitive treatment of the one or more of the above topic may be included on an optional basis.

9. Conventional Topics - Topics such as reviews of previously learned concepts, application of percent to interest, merchandising, etc. and statistical graphs will continue to receive emphasis but in the cases of the application of percent to business, the amount of emphasis will be reduced.

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