INEQUALITIES

AN ABSTRACT OF

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by

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Inequalities have become an integral part of the modern mathematics curriculum and this paper is concerned with the development of such in an Algebra I curriculum. The main source of information is taken from books developed by the School Mathematics Study Group.

The reader should see the logical development of structure associated with the study of inequalities and the manner in which inequalities can be used to reinforce the concepts developed in solving equations. The study of inequalities also fits the individual needs of students with diversified ability whether taking courses which are terminal or as preparation for continuance in mathematics.

Proofs of inequalities are provided to show a deductive system of reasoning that is an essential part of geometry and Algebra II courses. Many times exploration into new areas of inequalities provokes interest as well as motivates the student to make important discoveries on his own. Past experience, such as dealing with set theory, can be related to the study of inequalities. Also, solving verbal problems dealing with inequalities develops the ability to organize data in a logical sequence and to draw valid conclusions concerning the solution sets of these problems.

The student can be shown many different problems dealing with inequalities that exemplify a certain concept which needs to be reinforced for understanding. As a result, motivating a student can be accomplished because the student is not frustrated by doing the same problem over and over again.

Inequalities develop fundamental properties associated with the study of absolute values. Also, graphing inequalities provides a pictorial representation of a solution set. Such activity will also: (a) help the student to determine the order property of any two numbers, (b) provide the student with an opportunity to see the difference between a finite and infinite set of numbers, and (c) show the similarity to graphing equations.

In summation, inequalities are a dynamic expansion of the modern mathematics curriculum and offer the student in Algebra I an exciting motivational experience that is adaptable to both the present and future needs of the student.