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The language of mathematics: utilizing math in practice

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Abstrak

The subject of this book is how to formulate a mathematical model from an English description of a problem. This book views mathematical notation as a language and develops the implications of this view for translating English text into mathematical expressions and mathematical models, i.e. for applying mathematics to problems described in English. In order to apply mathematics to a practical problem, one must first transform an English statement of the problem and the requirements for its solution into mathematical expressions. This book examines this process in detail, presents new insight into it, and develops explicit guidelines for this important step. This book identifies the basic elements (values, variables, and functions) of the language of mathematics and presents the grammatical rules for combining them into expressions and other structures. Different notational forms for expressions are described and defined. Correspondences between parts of speech and other grammatical elements in English and components of expressions in the language of mathematics are identified. These lead to useful guidelines for translating English into the language of mathematics. In addition, the book contains many examples of translating English into mathematics. The approach presented in this book makes mathematics accessible to many people who have been turned off from mathematics by their early exposure to it"-- Provided by publisher.

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