

## PREFACE

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THIS Book consists of the first section of the Authors' larger work entitled "Elements of Algebra." As its name implies, it contains material suitable in quantity and quality for a student's first year's work in Algebra. The following are some of its leading characteristics.

**A BOOK FOR BEGINNERS.** The opening definition connects the subject with Arithmetic. The succeeding definitions refer to the simplest numerical operations. Each definition states clearly the elementary ideas needed at the beginning, leaving, in many cases, the more difficult conceptions to be considered after some progress has been made. The illustrations are taken from objects and processes with which young students are familiar, and where possible are made evident to the eye by diagrams.

**INDUCTIVE IN PLAN.** Each new operation is introduced by simple numerical examples and clearly connected with arithmetical processes with which the student is already familiar. Knowledge already obtained is thus utilized in acquiring further knowledge. Rules are given as the result of a series of observations and are consequently placed at the end of an investigation—not at the beginning. The examples in each exercise are arranged on the same general plan, *i.e.*, they lead gradually from the simple to the more complex.

**COMPLETE IN ITSELF.** The book containing, as it does, all the elementary operations, together with their applications to the solution of equations of one and two unknown quantities, furnishes a working knowledge of the subject sufficient for many of its most important applications. The form in which it is issued, and the matter it contains, will in the Authors' opinion, be found satisfactory to the large class of students, both in city and country, who have but a short time to devote to the study of Algebra.

THE AUTHORS.

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