ELEMENTS OF ALGEBRA

A COURSE FOR GRAMMAR SCHOOLS AND BEGINNERS
IN PUBLIC AND PRIVATE SCHOOLS

BY

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PREFACE.

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ALGEBRA has not always proved to be an interesting subject to the younger classes in our secondary or lower schools; indeed, in very many instances it has been greatly disliked by the students in such institutions. Two causes, chiefly, have conspired to produce this unfortunate condition of affairs, — one, the unattractive and uninteresting method of presenting the subject; the other, the difficulty of the examples and the complexity of the problems presented to the pupils for solution.

It is believed that this text-book presents the elementary facts of the science in such a manner that a deep interest will be awakened in algebraic processes, and that the examples which the student is required to solve are quite within the scope of his ability to master.

The author has in several instances departed from the order of classification commonly followed in text-books on algebra, because he has preferred to arouse an interest in the subject rather than to follow an order which is scientific, but which does not introduce the student to the attractive features of the study until he has mastered all the processes employed with most forms of algebraic quantities. And yet in no instance have erroneous mathematical ideas

been taught, nor has correct reasoning ever been sacrificed
for the purpose of exciting such interest.

The ideas of number which the pupil has gained in
arithmetic have been associated with those involved in
algebra in such a way that no difficulty may be experienced
in passing from reasoning upon definite numbers to reason-
ing upon general numbers.

The treatment of equations is introduced at the begin-
ning, and it is presented throughout the book, wherever it
is possible to do so advantageously, because, since ele-
mentary algebra treats of almost nothing except the
equation and general numbers, the student should be led
to a comprehension of the simpler forms of the equation
as soon as possible.

The method of presentation exemplified in the other
books of the series has been followed here, because it is
recognized as pedagogically correct and because it has met
with general approbation.

The work is designed to present the merest elements of
the science, and yet it is believed that the method of pres-
entation, the illustration and application of mathematical
principles, and the knowledge gained from the solution of
problems, will familiarize the student with the funda-
mental principles of the science to such a degree that easy
and rapid progress in the more abstract phases of the
subject will be secured whenever he pursues the subject
farther.

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