WALTON'S NORMAL SERIES. AN INTELLECTUAL ARITHMETIC, WITH AN INTRODUCTION TO WRITTEN ARITHMETIC

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Walton's Normal Series. An Intellectual Arithmetic, with an Introduction to Written Arithmetic by Geo. A. Walton & Electa N. L. Walton

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GEO. A. WALTON & ELECTA N. L. WALTON

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Trieste

Waltons' Normal Series.

AN

INTELLECTUAL

ARITHMETIC,

WITH AN

INTRODUCTION TO WRITTEN ARITHMETIC.

BY

GEO. A. WALTON, A. M.,

AND

ELECTA N. L. WALTON,

AUTHORS OF "WRITTEN ARITHMETIC," "PICTORIAL PRIMARY ARITHMETIC," "DICTATION EXERCISES IN ARITHMETIC," ETC.

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Office
MISS ELLEN L. WENTWORTH

PUBLISHERS' NOTICE.

WALTONS' ARITHMETICS.

THE SERIES CONSISTS OF THREE BOOKS, VIZ.:

I. The Pictorial Primary Arithmetic.

II. The Intellectual Arithmetic.

III. The Illustrative Practical Arithmetic.

The publishers invite the attention of Teachers and School Officers to this series of Text-Books, confident that on examination they will commend themselves to every practical educator. No other series, in general use, with which they are acquainted, comprises a full course of Arithmetic in THREE BOOKS.

WALTON'S DICTATION EXERCISES

are supplementary to Walton's Series, and afford a large amount of practice in the fundamental rules, and in all the important practical applications of arithmetic. They are designed for reviews and test exercises, and may be used at any stage of the pupil's progress, and in connection with any series of arithmetics.

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PREFACE.

THE design of this book is, first, to develop and train the mind. The plan adopted is to teach the simple facts of the science of numbers, and then to lead, from these perceived facts, by logical analyses to deductions, which are more general. It is the design, also, to prepare the student to apply the principles of numbers practically. With a view to this end, business transactions, and incidents which occur daily in common life, are frequently employed to illustrate the principles taught.

The Intellectual Arithmetic forms a connecting link between the Pictorial Primary and the Illustrative Practical Arithmetic, reviewing and extending the lessons upon simple numbers of the former, and illustrating, by small denominate numbers, the principles applied more generally and with larger numbers, in the latter. It is, however, a complete book of its class, and may be used independently, or in connection with any series of Arithmetics.

The work having already received the commendation of eminent practical teachers, in various parts of the country, it is now issued in a slightly modified form, in the confident hope that it will still further approve itself to teachers and school officers generally.

BOSTON, August, 1859.

SUGGESTIONS TO TEACHERS.

PLAN OF STUDY. — Pupils who have thoroughly studied the Primary Arithmetic can omit Sections I., II., III., IX., X., and XI. of the Intellectual.

The written exercises referred to in the foot-notes of this book should be performed in connection with the mental exercises in the simple numbers.

After the pupil has mastered simple numbers in the Intellectual, together with the written exercises, he will be prepared to take up the Illustrative Practical Arithmetic.

The same general plan is pursued in the treatment of subjects in both the Intellectual and the higher Arithmetics, so that they can be studied in connection; but it is recommended that the pupil shall study the subjects in the Intellectual considerably in advance of the same subjects in the higher Arithmetic.

ANALYSIS. — Solutions accompany nearly every class of examples in this book beyond Simple Addition and Subtraction. The pupil should not be confined strictly to these forms, but should be encouraged to think for himself, and present his own solutions; — accept any form which gives a logical analysis. The *conclusion* of the solution should in all cases be given in full.

To ascertain whether a pupil understands a solution, he should frequently be tested with examples outside of the book.

REVIEWS. — Frequent reviews are absolutely necessary, in order that the pupil may become thorough. A part of every recitation should be a review, and at stated times there should be *general* reviews. For the purposes of reviewing, and for the rapid combination of the simple numbers, *impromptu* exercises, similar to those upon page 42, are unequalled.

The circle and columns of figures upon pages 174, 175, and 176, afford the means of reviewing, in another form, the elementary combinations to an unlimited extent.

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INTELLECTUAL ARITHMETIC.

Section I.

Addition and Subtraction of the Numbers from One to Ten.

Article 1. 1. There is one bird upon one branch of a tree, and one upon another; how many birds are there upon both branches?

2. In going through the woods Walter saw one black squirrel and two gray squirrels; how many squirrels did he see?

3. Mary has three flowers in her left hand and one in her right hand; how many flowers has she?

4. If Mary puts one of the flowers which is in her left hand, with the flower in her right hand, how many flowers will she then have in her left hand? in her right hand? in both?

5. There are four cows in the yard: one of them is black and the rest are red; how many are red?

6. Robert has three white rabbits and two black rabbits; how many rabbits has he?

7. John had five cents, and spent four of them for a lemon; how many cents had he left?

8. Henry bought two books, his father gave him three books, and his teacher gave him one; how many books had he?