

**AN EXERCISE BOOK
IN ARITHMETIC,
ORAL AND WRITTEN**

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An Exercise Book in Arithmetic, Oral and Written by Gordon A. Southworth & John C. Stone

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GORDON A. SOUTHWORTH & JOHN C. STONE

**AN EXERCISE BOOK
IN ARITHMETIC,
ORAL AND WRITTEN**

AN EXERCISE BOOK IN ARITHMETIC

ORAL AND WRITTEN

FOR SUPPLEMENTARY OR INDEPENDENT USE
IN HIGHER GRADES, NORMAL SCHOOLS,
AND GENERAL REVIEW CLASSES

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ALGEBRAS, GEOMETRIES, ETC.

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PREFACE

THIS *Book of Exercises in Arithmetic* is written to supply a demand for just such a book in the higher grades, in normal schools, and in general review courses.

A general course in arithmetic should not attempt to meet the needs of a particular vocation, but should aim rather to develop:

- (a) Accuracy and some speed in the fundamental processes;
- (b) Skill in simple mental calculations;
- (c) A mastery of common fractions and power to use fractional relations;
- (d) Absolute accuracy in the use of the decimal point;
- (e) Facility in the use of the common tables of weights and measures;
- (f) A knowledge of common business forms and methods; and
- (g) The power to reason correctly in the face of rather complicated data.

All this should be done through drills and the applications of arithmetic to present-day usages and customs in the commercial and industrial world — percentage and simple measurements. Hence, no attempts are made to teach statistical industrial facts nor to give general encyclopedic information.

Part I consists of abstract drills, many of them in script for sight work to save time in copying. These are designed for daily use. (See Suggestions to Teachers.)

Part II is free from puzzles and obsolete matter. The problems are true to present-day commercial and industrial life,

and are designed to perform two functions; viz. to teach the practical use of number and to develop arithmetical power. In general, the problems are so selected that they offer a choice of several solutions, thus developing the power to judge and to choose.

Part III is taken from recent examinations in many of our best schools, thus showing the trend of instruction and requirements. They may be used for tests or general classroom work.

The thanks of the authors are due to superintendents and others who have kindly furnished copies of test problems.

G. A. S.
J. C. S.

APRIL, 1910.

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SUGGESTIONS TO TEACHERS

1. The Drill Tables are given in script to save the time of copying. In their use in "sight work" results are to be announced rapidly. In "written work" figures are not to be copied, but results only are to be written.

These drill tables may be used in a variety of ways, and each day's lesson may well begin with a few minutes of drill until the desired degree of accuracy and speed is secured. Table I, page 1, gives exercise in the forty-five primary combinations. It is very desirable that pupils should be able to announce instantly the sum of at least five digits. Any of the first five tables will afford drill in this line. The sum of the digits or of the numbers in any line or column may be written. The sum of twelve five-place numbers should be found in one minute or less.

In the same way most of the tables may be utilized in giving at sight differences, or products, or quotients of adjacent digits or numbers.

So, too, the drill tables in fractions and percentage should be freely used. The point to be constantly kept in mind is that in business we deal chiefly with small numbers held in the mind, and the power to give the combinations, differences, and relations of business numbers quickly and accurately is absolutely essential to success.

2. Part II furnishes a diversified list of well-graded and very practical problems, including all the essentials of arithmetic. The pupil should study each problem well, and select