AN EXPLANATORY ARITHMETIC DESIGNED AS A SCHOOL TEXT-BOOK, BY WHICH A COURSE OF READING MAY BE CARRIED OUT INTELLIGENTLY AND QUICKLY, HAVING AS DISTINCTIVE FEATURES - EXPLANATORY BOOK-WORK

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649054848

An Explanatory Arithmetic Designed as a School Text-Book, by Which a Course of Reading May Be Carried out Intelligently and Quickly, Having as Distinctive Features - Explanatory Book-Work by G. Eastcott Spickernell

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Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

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G. EASTCOTT SPICKERNELL

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EXPLANATORY ARITHMETIC

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SCHOOL TEXT-BOOK,

BY WHICH A COURSE OF READING MAY BE CARRIED OUT INTELLIGENTLY AND QUICKLY, HAVING AS DISTINCTIVE FEATURES—

EXPLANATORY BOOK-WORK

IN A SHORT AND SIMPLE FORM, WITH EXAMPLES CHARTED OUT, MODEL FORMS OF STATINGS, &c.

MISCELLANEOUS EXAMPLES AT THE END OF EACH SECTION; AND WITH THE QUESTIONS, REFERENCES TO FOREGOING BOOK-WORK,

SO THAT THE REASONS FOR RESULTS MAY BE AGAIN AND AGAIN CONSIDERED.

BY

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PORTSMOUTH;

GRIFFIN AND CO., 2, THE HARD.

LONDON AGENTS:

SIMPKIN, MARSHALL, & CO.

1883.

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1802. e. 1.

PREFACE.

In this text-book,—that Pupils may be required to read and think for themselves, and not depend too much on oral instruction,—Book-work is given in a simple form, and in as few words as seem consistent with proper explanations.

Examples have been so classified and arranged, that, by repetition, a thorough knowledge may be acquired; and that Pupils may not find themselves face to face with questions, at which they must stop until a Tutor can give them help, references to explanatory Book-work are given with questions set as Miscellaneous Exercises.

It is suggested that Pupils should be required to make good use of the references.

G. E. S.

Burgoyne House, Southsea.

TABLE OF CONTENTS.

List of Subjects.			page
Numeration Table			1
I.	Numeration		2
II.	Notation		3
III.	Simple Addition		5
IV.	„ Subtraction		6
V.	„ Multiplication		8
VI.	„ Division		11
VII.	Reduction		19
VIII.	Compound Addition		25
IX.	„ Subtraction		28
X.	„ Multiplication		30
XI.	„ Division		33
XII.	Measure of Right-angled Surfaces		37
XIII.	„ „ „ Solids		41
XIV.	Greatest Common Measure		43
XV.	Least Common Multiple		45
XVI.	Vulgar Fractions		46
XVII.	Decimal „		60
XVIII.	Circulating Decimals		66
XIX.	Practice		73
XX.	Proportion		78
XXI.	Rule of Three		79
XXII.	The Unitary Method		85
XXIII.	Compound Proportion		86
XXIV.	Interest, Simple and Compound		91
XXV.	Discount		95

| List of Subjects. | | |

EXPLANATORY ARITHMETIC.

1. THE figures 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, are used to express *nought or nothing*, and the numbers *one, two, three, four, five, six, seven, eight, nine.*

Numbers are expressed by one figure up to nine as 7 that is, seven units or single things.

Numbers are then reckoned in groups of ten each up to ninety-nine, and a second figure placed on the left of the units is used to give the number of such *groups of ten units each*, as 67, i.e. six groups of ten each and seven units.

Groups of a *hundred units each* are then formed, and a third figure is used to express them as 567, that is five groups of a hundred each, &c.

The reckoning is then carried on in successive groups, *each consisting of ten of the group last formed* (14*), and being expressed by an additional figure.

2. The following Table gives the names of the different groups in the order of their formation, commencing from units. The *name* of each group *tells* the *number of units* of which that group consists.

u. = units.
t. of u. = tens of units.
h. of u. = hundreds of units.

th. = thousands.
t. of th. = tens of thousands.
h. of th. = hundreds of thousands.

m. = millions.
t. of m. = tens of millions.
h. of m. = hundreds of millions.

th. of m. = thousands of millions.
t. of th. of m. = tens of ths. of millions.
h. of th. of m. = hunds. of ths. of millions.

b. = billions.
t. of b. = tens of billions.
h. of b. = hundreds of billions.

th. of b. = thousands of billions.
t. of th. of b. = tens of ths. of billions.
h. of th. of b. = hunds. of ths. of billions.

B

3. It will be seen from the foregoing Table that there are groups of *tens* and *hundreds* of UNITS,

" " " THOUSANDS,
" " " MILLIONS,
" " " THOUSANDS OF MILLIONS,
" " " BILLIONS,
" " " THOUSANDS OF BILLIONS,

and should the reckoning be further extended of TRILLIONS and THOUSANDS OF TRILLIONS,—hence, it has been found convenient to deal with figures in *sets of three groups each*, the right hand or lowest group of a set giving the name of that set, thus,

h t	h t	h t	h t	h t	h t
000	000	000	000	000	000
th (of b)	b	th (of m)	m	th	u

4. NUMERATION. TO EXPRESS IN WORDS A NUMBER WRITTEN IN FIGURES, mark off in sets of three figures each, beginning at units.

In each set, the figures give the number, and the right hand or lowest group of a set gives the name of that set.

25	113	345	678	943
b	th (of m)	m	th	u

Twenty-five *billions*, one hundred and twelve *thousand(s* of millions), three hundred and forty-five *millions*, six hundred and seventy-eight *thousand(s)* nine hundred and forty-three (*units*).

Ex. I. Express in words—

1. 5724158	2. 39254317
3. 849631287	4. 3742195164
5. 7285419632	6. 18742158763
7. 216425328	8. 352187654
9. 372516483	10. 456789123

5. If three figures are not required to express the number of units, thousands, millions, &c., then cyphers