APPLETON'S MATHEMATICAL SERIES: A PRIMARY ARITHMETIC

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Appleton's Mathematical Series: A Primary Arithmetic by G. P. Quackenbos & Geo. R. Perkins

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G. P. QUACKENBOS & GEO. R. PERKINS

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Trieste

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A

PRIMARY ARITHMETIC.

BY

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"AN ENGLISH GRAMMAR;" "FIRST LESSONS IN COMPOSITION;" "ADVANCED COURSE OF COMPOSITION AND RHETORIC;" "A NATURAL PHILOSOPHY;" "ILLUSTRATED SCHOOL HISTORY OF THE UNITED STATES;" "PRIMARY HISTORY OF THE UNITED STATES;" ETC.

UPON THE BASIS OF THE WORKS OF

GEO. R. PERKINS, LL.D.

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PREFACE.

This little book, the first of our Series of Arithmetics, presupposes no knowledge of numbers whatever. It tries to give a correct idea of their value, both absolute and relative, by treating them concretely as well as abstractly from the very outset, pictorial illustrations being freely used for that purpose. We have not sought in its pages to go *far*, but to go *thoroughly*. It is therefore confined to the four fundamental operations, a very brief view of fractions, the most important tables of moneys, weights, and measures, and easy exercises under them. These subjects, it is believed, are so treated, as to make the young pupil think for himself, and to lay the right kind of foundation for a mathematical course. One thing is taught at a time, and great care has been taken to present every thing in its proper place. It will be observed that throughout the book slate exercises go hand in hand with mental operations. In the author's opinion, they are indispensable, from the first, for inspiring the beginner with that interest in the subject which is essential to success.

This book imposes no labor on the teacher, in the way of explaining orally, furnishing examples, &c. It is thought to contain in itself all that is needed. The author would only ask those who use it to be sure that every lesson is thoroughly mastered, before proceeding to the next. Each principle presented, each table, should be perfectly understood and memorized before leaving it, even though it be necessary to repeat the lesson again and again. Time saved by allowing a single lesson to pass unmastered, will be a tenfold loss in the end.

The Roman Notation is not explained in this volume; but by means of the numerals used in the lesson-headings the pupil may readily be made to understand it.

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PRIMARY ARITHMETIC.

LESSON I.

Touch your head. How many heads have you? ONE.

Touch your eyes. How many eyes have you? TWO.

Touch the joints of your fore-finger. How many are there? THREE.

Touch the fingers of your left hand. How many are there? FOUR.

Touch the fingers and thumb of your left hand. How many do they make? FIVE.

When we say ONE, TWO, THREE, FOUR, FIVE, what do we do?

Answer. We count.

Count five; count four; count three; count two.

What are one, two, three, four, five, called?

Answer. **Numbers.**

Which is the smallest of these numbers?

Which is the greatest of these numbers?

LESSON II.

Count the birds on this branch. How many are there? FIVE.

If another alights on it, how many will there be? SIX.

If another joins them, how many will that make? SEVEN.

If another comes, how many? EIGHT.

One more will make how many? NINE.

And one more, how many? TEN.

Count six; count seven; eight; nine; ten.
Which is greater, ten or five? Two or six?

What do we use, to express numbers?
Answer. Ten characters, called **Figures.**

Learn the names of these ten figures, and how to make them neatly on your slate.

NAUGHT	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT	NINE
0	1	2	3	4	5	6	7	8	9

LESSON III.

Count these rabbits. How many are there?

How do we express ten with figures?

Answer. By putting a naught after a one (10).

Learn the numbers, going up from ten:—

Eleven 11	Fourteen 14	Seventeen 17
Twelve 12	Fifteen 15	Eighteen 18
Thirteen 13	Sixteen 16	Nineteen 19

Twenty . . . 20

Read these numbers: 13; 7; 19; 11; 9; 2; 20; 12; 5; 16; 3; 10; 4; 18; 6; 15; 8; 17.

Write in figures, six; ten; three; eighteen; eight; twenty; two; twelve; fourteen; five.

What is the reading of numbers called?

Answer. **Numeration.**

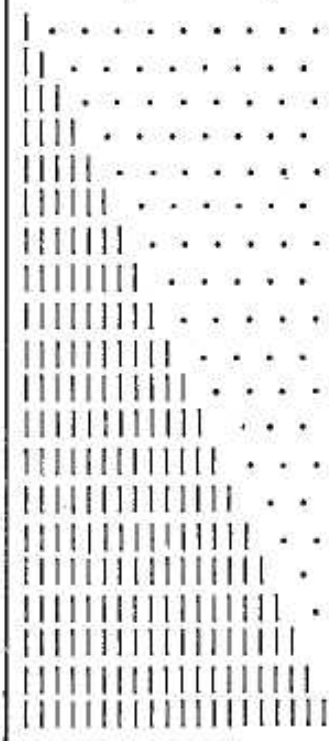
What is the writing of numbers called?

Answer. **Notation.**

LESSON IV.

Now we have some marks in different rows. Count those in each row.

The number of marks is given after each row; then come the written figures that represent this number, then the printed figures.



One	*1*	1
Two	*2*	2
Three	*3*	3
Four	*4*	4
Five	*5*	5
Six	*6*	6
Seven	*7*	7
Eight	*8*	8
Nine	*9*	9
Ten	*10*	10
Eleven	*11*	11
Twelve	*12*	12
Thirteen	*13*	13
Fourteen	*14*	14
Fifteen	*15*	15
Sixteen	*16*	16
Seventeen	*17*	17
Eighteen	*18*	18
Nineteen	*19*	19
Twenty	*20*	20

Which is greater, twenty or ten? 11 or 18?

LESSON V.

Learn the twenties:—

Twenty-one	21	Twenty-four	24	Twenty-seven	27
Twenty-two	22	Twenty-five	25	Twenty-eight	28
Twenty-three	23	Twenty-six	26	Twenty-nine	29

In the twenties, which figure remains the same, and which does not?

Answer. The left-hand figure remains the same—2. The right-hand figure changes.

What comes after 29? *Answer.* Thirty (30).

Learn the thirties:—

Thirty-one	31	Thirty-four	34	Thirty-seven	37
Thirty-two	32	Thirty-five	35	Thirty-eight	38
Thirty-three	33	Thirty-six	36	Thirty-nine	39

What is the left-hand figure in all the thirties? Which figure changes?

What comes after 39? *Answer.* Forty (40).

Learn the forties:—

Forty-one	41	Forty-four	44	Forty-seven	47
Forty-two	42	Forty-five	45	Forty-eight	48
Forty-three	43	Forty-six	46	Forty-nine	49

Fifty 50

Which is greater, fifty or forty? 49 or 39? 28 or 38? 26 or 17? 9 or 15? 15 or 30?

Count from 1 to 50. Count from 20 to 1 backwards; *twenty, nineteen, eighteen,* &c.