NEW PRIMARY ARITHMETIC, EMBRACING MENTAL AND WRITTEN EXERCISES, FOR BEGINNERS

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New Primary Arithmetic, Embracing Mental and Written Exercises, for Beginners by Benjamin Greenleaf

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A NEW

Primary Arithmetic,

EMBRACING

MENTAL AND WRITTEN EXERCISES,

FOR BEGINNERS

BY

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PREFACE.

THE object of this primary book is to teach the pupil how to think, and to enable him, by an almost imperceptible gradation of thought, to advance from the simplest forms of reasoning to the more vigorous exercises of the mind.

Hence, no arbitrary rules have been introduced, and only such hints and suggestions, with occasional formulæ of reasoning, as were considered absolutely necessary for the profitable study of the lessons.

In order that the reasoning of some of the principal processes might be the more apparent to the beginner, pictures of objects have been, to some extent, introduced. After these, counters are employed, as unit marks; and then follow lessons without any such aids, that the learner may early acquire the habit of depending upon mental resources alone for the solution of problems.

The numerous Pictorial Illustrations of the present edition have been designed and engraved, by skilful artists, especially for this work.

In this edition, the exercises in Written Arithmetic have been extended, and other improvements introduced, with a view of fully adapting the work to the present demands of the best primary schools.

TO TEACHERS.

THE lessons assigned to the learner should never be longer than will admit of being thoroughly prepared for recitation.

The better to secure the attention of each member of the class, and elicit earnestness of thought, the questions should be read to the whole class, and each pupil taught to be in readiness, in whatever order called upon, to give promptly the solution required.

The solutions should be uniformly according to such forms as are deemed by the teacher the neatest and best. The greatest care should be observed to have them always expressed in language entirely accurate, and pronounced in a clear and distinct manner.

Frequent reviews, especially of the tables, will alone give thoroughness. In general, with a lesson in advance, it will be advantageous to assign some portion previously gone over, as a review.

Every term, or process, connected with any of the lessons, which the beginner may be likely not readily to understand, the intelligent teacher will not need to be reminded, should be clearly explained to the pupil, before assigning the lesson.

NEW

PRIMARY ARITHMETIC.

LESSON I.

How many thumbs have you on each hand?

How many hands have you? How many eyes?

If you wish to know how many fingers you have, what must you do? I must count them.

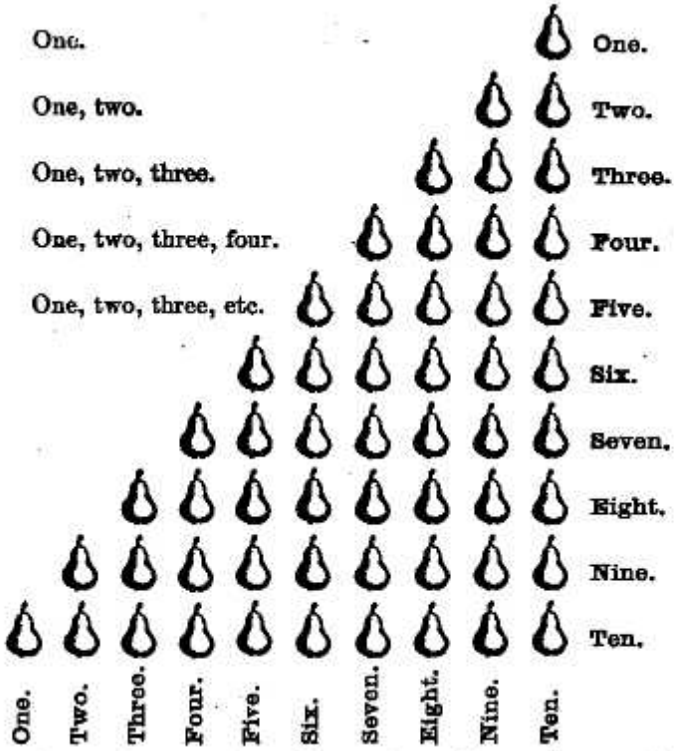
What, then, is counting? **Counting** is finding how many there are of things.

In counting, what is a single thing called? **One.**

What is a number? A **Number** is one, or more than one.

LESSON II.

Count the pears in each row, from left to right, and tell the number.

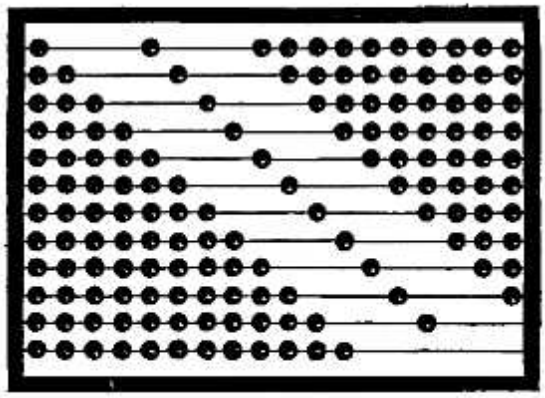


Count the pears in each row, from the top downward.

How many pears are there in the second row from the top?

How many pears are there in the next to the lowest row?

LESSON III.



Answer the following questions by counting the balls in the picture of the Numeral Frame: —

How many balls are one ball and one ball?
How many balls are two balls and one ball?
How many balls are three balls and one ball?
How many balls are four balls and one ball?
How many balls are five balls and one ball?
How many balls are six balls and one ball?
How many balls are seven balls and one ball?
How many balls are eight balls and one ball?
How many balls are nine balls and one ball?
Count from one to five. From two to six.
Count from one to seven. From three to seven.
Count from seven to ten. From one to ten.

LESSON IV.

Count ten books. Count ten chickens.

What do one, two, three, etc., express? **Numbers.**

How, then, can you express numbers? By **words.**

What is another method of expressing numbers? By certain marks called **Figures.**

How many different figures are used in expressing numbers? **Ten.**

Make on the slate the figure 1 for one; 2 for two, 3 for three; 4 for four; 5 for five.

Make on the slate the figure 6 for six; 7 for seven; 8 for eight; 9 for nine.

Make on the slate 0 for no number.

What is the 0 called? **Cipher, Zero,** or **Naught.**

Write on the slate and read the following figures:—

2, 3, 6, 7, 0, 4.

Write on the slate and read the following figures:—

8, 9, 1, 0, 5, 6.

What is one of any kind called? **A Unit.**

How many ones or units are one ten? **Ten.**

How can you express one ten by figures? By writing the figure 1 with 0 on the right; thus, *10.*

For what, then, does the figure 1, with 0 at the right, stand? **One ten, or ten.**

Write on the slate and read,—

9, 8, 7, 10, 6, 5.