
The Arithmetic Reader for Third Grade Pupils

Hall Frank H

Title: The Arithmetic Reader for Third Grade Pupils

Author: Hall Frank H

This is an exact replica of a book. The book reprint was manually improved by a team of professionals, as opposed to automatic/OCR processes used by some companies. However, the book may still have imperfections such as missing pages, poor pictures, errant marks, etc. that were a part of the original text. We appreciate your understanding of the imperfections which can not be improved, and hope you will enjoy reading this book.



0

THE
ARITHMETIC READER

FOR
THIRD GRADE PUPILS.

BY
FRANK H. HALL,

AUTHOR OF "HALL'S HELPS IN THE STUDY OF HISTORY, OR THE BACKBONE OF UNIVERSAL HISTORY," "ARITHMETIC OF THE FARM AND WORKSHOP," AND "ARITHMETIC READER FOR SECOND GRADE PUPILS."

GEO. SHERWOOD & CO.
307 AND 309 WABASH AVENUE, CHICAGO.

1894.

EdugT 118.94.450

HARVARD COLLEGE LIBRARY
GIFT OF
GINN AND COMPANY
DEC. 26, 1923

COPYRIGHT, 1894,
By GEORGE SHERWOOD & CO.
CHICAGO.

The Lakeside Press
R. R. DONNELLEY & SONS CO. CHICAGO

SUGGESTIONS TO TEACHERS.

1. *The preparation necessary to the learner before beginning this book:*

(a) The pupil must be able to read without hesitation new matter of the grade usually found in the first half of a Third Reader.

(b) All the work that is found in the ARITHMETIC READER FOR SECOND GRADE PUPILS, must be mastered. Especially, should the pupil be familiar with the forty-five primary problems in addition, found on pages 23 and 65 of the Second Grade Book, and with the forty-seven primary problems in multiplication on pages 38, 69, and 95, and with the meaning of certain arithmetical expressions given on pages 41, 51, and 67.

2. *The preparation necessary to the learner before beginning any page of this book:*

(a) Before the pupil is allowed to attempt to read any one of the following pages the teacher should see that he is acquainted with every word, abbreviation, and sign, used thereon. The meaning of terms should be taught in this grade, not by defining them, but by using them. This is the natural method of learning new words. It is the method by which the pupil acquires a vocabulary of five hundred to seven hundred words before he enters the primary room. If the word *numerator* is to be taught, the pupil should first see a numerator—see *many numerators*; then be given the name; then hear and speak the word, and see its written form, until the symbol (the spoken or written word) instantly suggests that which is symbolized.

(b) By means of oral instruction and training, all the new number facts on a page should be taught *before the pupil attempts to read the page*. A MENTAL GYMNASTIC EXERCISE SUGGESTED BY THE PAGE ITSELF, SHOULD PRECEDE THE READING. If properly conducted, this will promote a mental vigor and acumen that will enable the pupil to see behind the words and signs on a page, that for which the symbols stand.

3. If the work in the Second Grade Book has been properly done, the pupil, before taking this book, has learned something of the five fundamental arithmetical processes. He can solve little problems in addition, subtraction, multiplication, and in each of the two cases of division. He is familiar with the terms add, subtract, product, quotient, difference, etc. He cannot define them, but he can use them, and can understand the meaning of these words when he hears them, or sees them on the blackboard or on the printed page. In order to apply the fundamental processes to fractions, he has nothing new to learn, except to become acquainted with the objects to be numbered; with halves, fourths, fifths, sixths, etc. His attention should not *at first* be called to the numerical symbols for the objects, as, $\frac{1}{2}$, $\frac{1}{4}$, etc., but to the objects themselves, as, \ominus , \oplus , etc. If the pupil is familiar with that for which the word *fourth* stands, he will have no more difficulty in adding 1 fourth and 1 fourth than he has in adding 1 apple and 1 apple. Indeed, a large part of the work of teaching the application of the fundamental processes to fractions, is accomplished, when the pupil has become thoroughly familiar with the real fraction, and sees in every symbol fraction, as $\frac{3}{4}$, the real fraction for which it stands. The Pestalozzian principle, *the thing first, the name or the symbol afterwards*, must not be ignored in this work.

4. Nearly every lesson on the following pages has been tested in the school-room as thoroughly as it could be done with type-written matter, and the results, both in the mental training furnished and in the interest and enthusiasm manifested by the pupils in the vigorous exercise of their thought power, have been a revelation to the writer and to those associated with him.

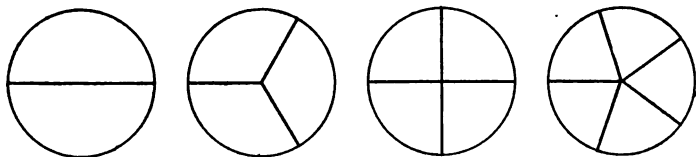
It is believed that the teachers (representing more than twenty states and territories of the United States), who have found the ARITHMETIC READER FOR SECOND GRADE PUPILS helpful to them in their efforts to "make thoughtful, intelligent readers" and to "develop independence and strength in solving number problems," will be willing to give the Third Grade Book a trial. When this shall have been done, the author will be grateful for such criticisms and suggestions as the results may warrant.

Waukegan, Ill., 1894.

F. H. H.

THE ARITHMETIC READER.

TO THE TEACHER.—Draw upon the blackboard diagrams like those appearing below and teach the meaning of the expressions, one half, one third, one fourth, two thirds, two fourths, etc. Read "SUGGESTIONS TO TEACHERS," especially section 2, page 3.



1. One apple and one apple are — apples.
2. One third and one third are — thirds.
3. Three apples less one apple are — apples.
4. Three fifths less one fifth are — fifths.
5. Two fourths and two fourths are — fourths.
6. Four fifths less one fifth are — fifths.
7. John had one apple; he gave one fourth of it to Henry; he then had — fourths of an apple.
8. Mrs. Brown gave one half of an apple to Mary and one half of an apple to Sarah; to both she gave — .
9. Alfred had one half of an apple; William had one fourth of an apple; together they had — fourths of an apple.

TO THE TEACHER.—Give many problems similar to those appearing below before the pupil attempts to read the page. Speak slowly and give time for thought. Use the diagrams. When the pupil takes the book, he should be able to read without hesitation.

1. Two halves are —— whole.
2. Two wholes are —— halves.

3. Three thirds are —— whole.
4. Two wholes are —— thirds.

5. Four fourths are —— whole.
6. Two wholes are —— fourths.

7. Five fifths are —— whole.
8. Two wholes are —— fifths.

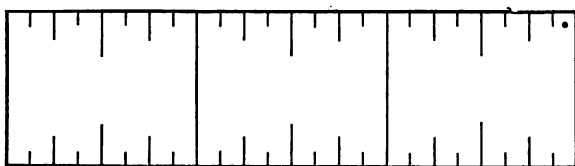
9. Two times two apples are —— apples.
10. Two times two fourths are —— fourths.

11. One half of four apples is —— apples.
12. One half of four fifths is —— fifths.

13. Mary's mother gave one half of an apple to each of four children; to all she gave —— apples.
14. A good lady divided two pies equally among some hungry children, giving to each child one third of a pie; there were —— children.
15. Helen had a nice sweet orange; she gave two fifths of it to Sarah and two fifths to Jane; she then had ——.

16. At one half of a cent each, four apples cost —— cents.
17. If apples cost $\frac{1}{2}$ of a cent each, with three cents I can buy —— apples; with four cents I can buy —— apples.

TO THE TEACHER.—See suggestion on page 6; also read again section 2, (b), page 3. Require the pupil to draw a line one inch long and to divide it into halves, fourths, and eighths.

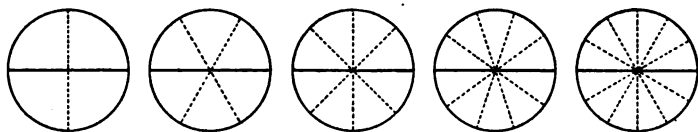


1. Three inches are ——— half-inches.
2. Two inches are ——— fourth-inches.
3. Four half-inches are ——— inches.
4. One half of three inches is —————.
5. One inch is ——— eighth-inches.
6. Two inches are ——— eighth-inches.
7. One half-inch is ——— eighth-inches.
8. One fourth-inch is ——— eighth-inches.
9. One and one half inches are ——— eighth-inches.
10. One half of an inch and one fourth of an inch are ——— fourths of an inch.
11. One half of an inch and one eighth of an inch are ——— eighths of an inch.
12. One half of an inch less one eighth of an inch are ——— eighths of an inch.
13. Two times three eighths of an inch are ——— eighths of an inch.
14. One half of four eighths of an inch is ——— eighths of an inch.
15. One eighth of an inch is contained in a half inch ——— times. One fourth of an inch is contained in a half inch ——— times.

Teach the meaning of expressions denoting one or more of the equal parts of a unit from sixths to twelfths inclusive. Use diagrams similar to those on page 5.

1. Six marbles and 2 marbles are — marbles.
2. Six twelfths and 2 twelfths are — twelfths.
3. 6 marbles less 2 marbles are — marbles.
4. 6 twelfths less 2 twelfths are — twelfths.
5. Three times 2 marbles are — marbles.
6. Three times 2 twelfths are — twelfths.
7. 2 apples are contained in 8 apples — —.
8. 2 tenths are contained in 8 tenths — —.
9. One half of 8 apples is — apples.
10. One half of 8 tenths is — tenths.
11. Mary earned 2 tenths of a dollar Thursday and 3 tenths of a dollar Friday; in both days she earned — tenths of a dollar.
12. Reuben had 6 tenths of a dollar; he spent 4 tenths of a dollar; he then had — tenths of a dollar.
13. John had 2 tenths of a dollar; Henry had three times as much money as John; Henry had — tenths of a dollar.
14. James had 3 oranges which he divided among the boys in his class, giving to each boy one third of an orange; there were — boys in the class.
15. Edwin had 3 apples which he divided equally between 2 boys; each boy received — and — — apples.
16. The baker had 2 pies exactly alike; Ned bought 1 third of one of them, and Peter bought 1 fourth of the other. Who bought the larger piece?

Use diagrams like those appearing below and lead the pupil to perceive that one half can be expressed in fourths, sixths, eighths, etc. Give many problems similar to those on this page before the reading of the page is attempted by the pupil.



1. One half is ——— fourths.
2. One half is ——— eighths.
3. One half is ——— sixths.
4. One half is ——— twelfths.
5. One half is ——— tenths.
6. One half and one fourth are ——— fourths.
7. One half and one sixth are ——— sixths.
8. One half and one tenth are ——— tenths.
9. One half and one eighth are ——— eighths.
10. One half and one twelfth are ——— twelfths.
11. One half less one sixth are ——— sixths.
12. One half less one tenth are ——— tenths.
13. One half less one eighth are ——— eighths.
14. One half less one twelfth are ——— twelfths.
15. One half and two tenths are ——— tenths.
16. One half less two tenths are ——— tenths.
17. One half and two twelfths are ——— twelfths.
18. One half less two twelfths are ——— twelfths.
19. 2 fourths are ——— half. 3 sixths are ——— ———.
20. 6 fourths are one and ——— ———.
21. 8 fourths are ———. 6 thirds are ———.
22. 10 fourths are two and ——— ———.