
Math Mammoth Introduction to Fractions

Contents

Introduction	4
Dividing into Two Parts - Halves	5
Fourths and Other Parts	7
Practice with Parts	9
Understanding Fractions	12
Mixed Numbers 1.....	15
Mixed Numbers 2.....	19
Add and Subtract Like Fractions	23
One Whole and Its Fractional Parts	26
Adding Like Fractions.....	29
Adding Mixed Numbers	32
Subtracting Fractions and Mixed Numbers	35
Equivalent Fractions	37
Comparing Fractions	40
Practicing with Fractions	42
Part of a Whole Group	45
Finding Parts with Division	48
Finding Fractional Parts Using Division	51
Fractions Review	54
Review	55
Answers	56
About the Author	74

Introduction

Math Mammoth Introduction to Fractions contains fraction-related material suitable for approximately grades 2-4. This material does not include division or multiplication of fractions, nor adding unlike fractions. The lessons are mostly simple, introductory lessons to various fraction topics.

The one exception to the "easiness" is the topic of finding fractional parts of a whole using division. These lessons are in the end of the book. I have included them here since I have included the topic in my Math Mammoth Grade 4 Complete Worktext (LightBlue Series), and they are accessible for children in 4th grade who have practiced single-digit division and long division.

Other than that, the topics covered are on a simple level, constantly illustrated with pictures, and with small denominators. The presentation avoids spelling out specific rules for manipulating fractions, but instead relies on the usage of pictures on a very concrete level.

The topics covered are

- one-half and fourth parts
- concept of a fraction
- concept of a mixed number
- adding and subtracting like fractions
- adding and subtracting mixed numbers with like fractional parts
- equivalent fractions with pictures
- comparing fractions - special cases.
- finding fractional part of a whole using division

The lessons proceed so that the first two are suitable for second grade, and the rest are suitable for third or for fourth grade.

The answers are in the back of the book.

I wish you success in your math teaching!

Maria Miller, the author

Dividing into Two Parts — Halves

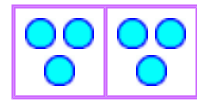
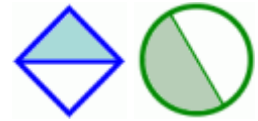
If you divide something into *two* same sized parts, or *two equal* parts, then either part is one-HALF of the whole.

We write one-half this way: $\frac{1}{2}$

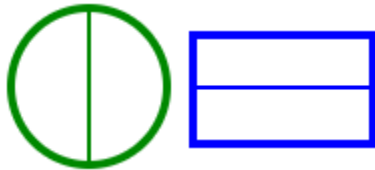
You can also write one-half this way: $1/2$

You can also find half of so-many objects. For example, you can find half of ten apples. It is five apples.

You can also find half of a number. For example, half of 6 is 3.



1. a. Color one half of each shape.



b. Color two halves of each shape.



2. Draw a line into these shapes and divide them into two halves. Color one half.



3. Divide the items into two EQUAL groups. Write an addition sentence. Find half of the total.

<p>10 balls</p>	<p>40</p>	<p>24</p>
<p>a. $\underline{\quad} + \underline{\quad} = \underline{\quad}$</p> <p>$\frac{1}{2}$ of 10 is $\underline{\quad}$.</p>	<p>b. $\underline{\quad} + \underline{\quad} = \underline{\quad}$</p> <p>$\frac{1}{2}$ of 40 is $\underline{\quad}$.</p>	<p>c. $\underline{\quad} + \underline{\quad} = \underline{\quad}$</p> <p>$\frac{1}{2}$ of 24 is $\underline{\quad}$.</p>