
Math Mammoth Division 2

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Introduction

Math Mammoth Division 2 is a continuation from the Math Mammoth Division 1 book. It includes lessons on division, long division, remainder, part problems, average, and problem solving. The book is most suitable for fourth grade, when children are first introduced to long division.

We start out by reviewing basic division by single-digit numbers. Then students study some basic division topics such as division terms, division by 1 and 0, and dividing by whole tens and hundreds.

The lesson *Finding Parts with Division* is very important. It shows an important relationship between fractions and division. For example, we can find $\frac{3}{4}$ of a number by first finding $\frac{1}{4}$ (divide by 4), then multiplying that result by 3.

The lesson on remainder is just before the first lesson on long division, because that is where the student needs to understand this concept very well.

Long division is taught in several small steps over many lessons. We start with the situation where each of the thousands, hundreds, tens, and ones can be divided evenly by the divisor. Then is introduced the remainder in the ones. Next comes the situation where we have a remainder in the tens. Finally, when we have a remainder in the hundreds, and so on.

All along the long division lessons, the process is explained so that the student can understand what it is based on. After the many lessons that practice and explain long division, we see a comparison between repeated subtraction and long division. The purpose of this lesson is to shed light in the basic idea of long division, and not to practice a new calculation method.

After long division is mastered, we study the concept of average. Next comes *Long Division with Remainder*, which also contains a section on packing problems

The next two lessons contain plenty of part-related problems to solve. These problems deal with fractional parts of a sum total, and include both dividing and multiplying. I have included many diagrams and pictorial representations of these problems to help the student. Encourage him to draw one for those problems that don't have any.

The last two topics in this section are divisibility and a two-digit divisor in long division. These topics are introductory only, as children will continue studying them in the fifth grade.

Answers are in the end of the book.

I wish you success in your math teaching!

Maria Miller, the author

Helpful Resources on the Internet

Mr. Martini's Classroom: Long Division

An interactive long division tool.

<http://www.thegreatmartinicompany.com/longarithmetic/longdivision.html>

Double-Division.org

Another form of long division algorithm - takes the guesswork away from estimating how many times the divisor goes into what needs to be divided. Also called 1-2-4-8 division.

<http://www.doubledivision.org/>

Factor Game

Interactive game to practice divisibility among numbers 1-100. Play against the computer or a friend.

<http://illuminations.nctm.org/ActivityDetail.aspx?ID=12>

The following games can be used to practice basic division facts, if the student hasn't mastered them.

A+ math games

Practice all four basic operations with math bingo (matho), hidden picture games, or concentration games.

<http://www.aplusmath.com/games/>

Math Magician games

Flashcard problems in all 4 operations. Answer 20 questions in 1 minute.

<http://www.oswego.org/ocsd-web/games/Mathmagician/cathymath.html>

Division Practice at AAAMath

Learn or practice basic division facts, and more.

<http://www.aaastudy.com/div39hx3.htm>

Cross the Swamp

Help Little Ron move from log to log across the swamp and practice multiplication/division or addition/subtraction.

<http://www.bbc.co.uk/schools/starship/maths/crosstheswamp.shtml>

Math Car Racing

Keep ahead of the computer car by thinking logically, and practice any of the four operations.

<http://www.funbrain.com/osa/index.html>

Arithmetic Game

Find numbers to fit an equation that may use all four operations.

<http://www.primarygames.com/math/arithmeticgame/index.htm>

Primary Games

A collection of games. The following links open the evaluation versions of some division-related games. The game collections themselves are sold at

<http://www.primarygames.co.uk/>

- **Eggs on Legs**

<http://www.primarygames.co.uk/PG5/Eggs/Div/eggdiv.html>

- **DiviPods**

<http://www.primarygames.co.uk/pg4/Divipods/divipods.html>

- **Division Divers**

<http://www.primarygames.co.uk/pg3/ddivers/ddivers.html>

- **Sum Sense - Division**

<http://www.primarygames.co.uk/pg2/sumsense/sumdiv.html>