



TABLE OF CONTENTS

Start Quick and Ramp It Up! 4th Grade Division

Division	PAGE
Table of Standards:	4
4.D.1 Quick Start: 2-Digit by 1-Digit Division	6
4.D.2 Quick Start: 2-Digit by 1-Digit Division	16
4.D.3 Ramp Up: 3-Digit by 1-Digit Division	20
4.D.4 Ramp Up: 3-Digit by 1-Digit Division	31
4.D.5 Ramp Up: 4-Digit by 1-Digit Division	40
4.D.6 Ramp Up: 4-Digit by 1-Digit Division	47
4.D.7 Ramp Up: Introduction to Remainders	54
4.D.8 Ramp Up: Division with Remainders	60
4.D.9 Ramp Up: Answering the Right Question with Division	63
4.D.10 Ramp Up: Answering the Right Question with Division	67
4.D.11 Ramp Up: Finding & Correcting Division Mistakes	70
Grid paper:	75

Content and Instruction Extras

Division	PAGE
MEANING BEHIND THE MATH	
About Area and Array Division Models and Partial Quotients (4.1C)	7
Different Kinds of Division	16
Sample Conversation about the Meaning of Division (4.1G)	16
Sample Conversation about Concrete Models for Division (4.1G)	21
Sample Conversation about Pictorial Models for Division (4.1G)	31
What If a Student Underestimates When Dividing?	40
The Meaning of Remainders (4.1B)	60
Estimation (4.1C)	70
READING, WRITING, AND SPEAKING TO IMPROVE CRITICAL THINKING	
How Does Asking More Than One Question About a Problem Situation Help Students Learn to Solve Problems? (4.1B)	63
Justification (4.1G)	67
WORKING THE CLASSROOM	
Tutoring vs. Intervention: Two Sides of the Same Coin (Part 1)	40
Tutoring vs. Intervention: Two Sides of the Same Coin (Part 2)	47



TABLE OF STANDARDS

The activities in this 4th grade Division book address the following standards.

Where are we going? Focus Standards		Activity
(4.4)	Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:	
4.4E	represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays, area models, or equations; Supporting Standard	1 – 8
4.4F	use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor. Supporting Standard	1 – 11
4.4H	solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders. Readiness Standard	8, 9, 10, 11

What kind of mathematical thinking will we use? Working Standards		Activity
(4.4)	Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:	
4.4G	solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders. Readiness Standard	1, 3

What kind of mathematical thinking will we use? Process Standards		Activity
(4.1)	Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	
4.1A	apply mathematics to problems arising in everyday life, society, and the workplace;	1, 2, 3, 4, 6, 7, 8, 9, 10, 11
4.1B	use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;	1, 2, 3, 4, 7, 8, 9, 10, 11
4.1C	select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;	1, 2, 3, 4, 5, 6, 7, 11
4.1D	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;	1, 2, 3, 4, 7
4.1E	create and use representations to organize, record, and communicate mathematical ideas;	6, 8, 10
4.1F	analyze mathematical relationships to connect and communicate mathematical ideas.	1, 2, 3, 4, 7, 8, 9, 10, 11
4.1G	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	9, 10