

Proportionality, Grade 7

Note: In this book, we have not specified when students should use a graphing calculator to create tables, graphs, and equations. We leave this up to the teacher's discretion.

ACTIVITY	TOPICS	PAGE
<u>Traveling with Gulliver</u>	Constant Rate of Change	8
<u>Buzz Off!</u>	Constant Rate of Change	17
<u>Going the Distance</u>	Constant Rate of Change	29
<u>Connections</u>	Calculate & Represent Unit Rate	41
<u>Let's Make a Deal</u>	Calculate & Represent Unit Rate	60
<u>Zombie Attack</u>	Calculate & Represent Unit Rate	70
<u>Heart Healthy</u>	Constant of Proportionality	78
<u>Soil Cleanup</u>	Constant of Proportionality	87
<u>Are Zombies Golden?</u>	Constant of Proportionality	97
<u>Heads Up!</u>	Conversions Between Measurement Systems	108
<u>Measurement Mania</u>	Conversions Between Measurement Systems	116
<u>Metered Measures</u>	Conversions Between Measurement Systems	128
<u>More Ways</u>	Basic Ratio, Rate, & Percents	140
<u>We See Them Every Day!</u>	Ratio, Rate, & Percent with Financial Literacy	160
<u>Can You Afford It? Remember the Tax</u>	Ratio, Rate, & Percent	170
<u>Can You Picture This?</u>	Percent Increase & Decrease	180
<u>Be the Detective: Same & Different</u>	Percent Increase & Decrease	201
<u>It's in the Details</u>	Analyze Language	209
<u>What Went Wrong?</u>	Ratios, Rates, & Percents: Find the Mistake	221
<u>Think About It</u>	Ratios, Rates, & Percents: Answer the Right Question	237
<u>Graphs</u>		245

Content and Instruction Extras

MEANING BEHIND THE MATH

Representing Constant Rate of Change	9
Practical Proportionality	18
Bringing Meaning to Slope	30
Connecting Units of Measure with Unit Rate	42
Better Deal vs. Costs Less	60
Equivalent Ratios and the Constant of Proportionality	70
Constant of Proportionality Breakdown	88
Difference Between Constant of Proportionality and Slope	98
Conversions in Tables	109
Teaching Students to Set Up Proportions	118
Vertical Alignment of Conversions	130
Vertical Alignment of Percents	141
Personal Financial Literacy is Real	161
The Importance of Multiple Solution Methods	181

READING, WRITING, AND SPEAKING TO IMPROVE CRITICAL THINKING

Know/Need to Know Chart	79
Analyzing Problems to Figure Out the Solution	171
Using Similarities and Differences as a Problem-Solving Strategy	202
Take the Focus off Computation and Pay Attention to the Language	210
Thinking About Thinking	238

WORKING THE CLASSROOM

Teaching Students to Find Their Mistakes	222
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TABLE OF STANDARDS

(PG. 1 OF 2)

The activities in **Proportionality, Grade 7** address the following standards.

What mathematical concepts will we be learning? Content Standards		Activity
<p>(7.4) Proportionality. The student applies mathematical process standards to develop an understanding of proportional relationships in problem situations. The student is expected to:</p>		
7.4A	represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$. Readiness Standard	2 , 3 , 4 , 5 , 6 , 7 , 8 , 9
7.4B	calculate unit rates from rates in mathematical and real-world problems. Supporting Standard	1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10 , 11 , 12
7.4C	determine the constant of proportionality ($k = y/x$) within mathematical and real-world problems. Supporting Standard	1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10 , 11 , 12
7.4D	solve problems involving ratios, rates, and percents, including multistep problems involving percent increase and percent decrease, and financial literacy problems. Readiness Standard	13 , 14 , 15 , 16 , 17 , 18 , 19 , 20
7.4E	convert between measurement systems, including the use of proportions and the use of unit rates. Supporting Standard	1 , 10 , 11 , 12
<p>(7.13) Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:</p>		
7.13A	calculate the sales tax for a given purchase and calculate income tax for earned wages. Supporting Standard	14

What kind of mathematical thinking will we use? Process Standards		Activity
<p>(7.1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</p>		
7.1A	apply mathematics to problems arising in everyday life, society, and the workplace.	ALL
7.1B	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.	ALL
7.1C	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. Note: In this book, we have not specified when students should use a graphing calculator to create tables, graphs, and equations. We leave this up to the teacher's discretion.	ALL
7.1D	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	ALL
7.1E	create and use representations to organize, record, and communicate mathematical ideas.	ALL
7.1F	analyze mathematical relationships to connect and communicate mathematical ideas.	ALL
7.1G	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	ALL