

## MOMENTUM MATH TEACHER'S EDITION

Level H



### TABLE OF CONTENTS

#### Unit 1 – Operations on Rational Numbers

<b>Lesson A: Positive and Negative Numbers</b> .....	1
What is a negative number?	
<b>Lesson B: Adding Integers</b> .....	11
How is adding negative numbers like adding positive numbers, and how is it different?	
<b>Lesson C: Subtracting Integers</b> .....	21
How is subtracting negative numbers like subtracting positive numbers, and how is it different?	
<b>Lesson D: Multiplying and Dividing Integers</b> .....	31
How is multiplying and dividing negative numbers like multiplying and dividing positive numbers, and how is it different?	
<b>Lesson E: Comparing Rational Numbers</b> .....	41
Where do positive and negative fractions fall on the number line?	
<b>Lesson F: Adding and Subtracting Improper Fractions and Mixed Numbers</b> .....	51
How do you regroup to add and subtract improper fractions and mixed numbers?	
<b>Lesson G: Multiplying and Dividing Improper Fractions and Mixed Numbers</b> .....	61
How is multiplying and dividing improper fractions and mixed numbers like multiplying and dividing proper fractions?	
<b>Lesson H: Adding and Subtracting Rational Numbers</b> .....	71
What strategies can you use to add and subtract rational numbers more easily?	
<b>Lesson I: Multiplying and Dividing Rational Numbers</b> .....	81
How do you multiply and divide signed rational numbers?	
<b>Lesson J: Exponents</b> .....	91
What do exponents represent?	

#### Unit 2 – Ratios and Proportions

<b>Lesson A: Writing Ratios</b> .....	101
What do ratios represent?	
<b>Lesson B: Equivalent Ratios</b> .....	111
How are ratios used to describe the relative sizes of two quantities?	
<b>Lesson C: Proportions</b> .....	121
How are the numbers in a proportion related?	
<b>Lesson D: Cross-Products</b> .....	131
How can you use cross-products to find a missing number in a proportion?	
<b>Lesson E: Proportions and Percents</b> .....	141
How can you use a proportion to solve a percent problem?	
<b>Lesson F: Probability</b> .....	151
How can you use parts of a whole to describe how likely an event is?	
<b>Lesson G: Rate</b> .....	161
What is a rate?	
<b>Lesson H: Rate Problems</b> .....	171
How can you use proportions to solve rate problems?	
<b>Lesson I: Average Speed, Distance, and Time</b> .....	181
What is speed?	
<b>Lesson J: Multistep Rate Problems</b> .....	191
What strategies can you use to solve multistep rate problems?	

## Unit 3 – Equations and Inequalities

<b>Lesson A: Equality</b> .....	201
What is a balanced equation?	
<b>Lesson B: Solving Equations by Adding and Subtracting</b> .....	211
How do you balance an equation with addition and subtraction?	
<b>Lesson C: Solving Equations by Multiplying and Dividing</b> .....	221
How do you balance an equation with multiplication and division?	
<b>Lesson D: Strategies for Solving Multistep Equations</b> .....	231
How do you isolate a variable in more than one step?	
<b>Lesson E: Using the Distributive Property</b> .....	241
How can the distributive property help you simplify an equation before you solve it?	
<b>Lesson F: Applications of Equations</b> .....	251
When do you use equations in the real world?	
<b>Lesson G: Equations and Percent Problems</b> .....	261
How can you use an equation to solve a percent problem?	
<b>Lesson H: Graphing Inequalities</b> .....	271
What is an inequality?	
<b>Lesson I: Solving Inequalities</b> .....	281
How can you solve an inequality?	
<b>Lesson J: Applications of Inequalities</b> .....	291
When do you use inequalities in the real world?	

## Unit 4 – Functions and Graphing

<b>Lesson A: The Coordinate Grid</b> .....	301
How can you plot points on a coordinate grid?	
<b>Lesson B: Equations</b> .....	311
How is an equation related to a rule?	
<b>Lesson C: Functions</b> .....	321
What is a function?	
<b>Lesson D: Rate of Change</b> .....	331
What is rate of change?	
<b>Lesson E: Understanding Slope</b> .....	341
What is the slope of a line?	
<b>Lesson F: Computing Slope</b> .....	351
How can you use two points to compute the slope of a line?	
<b>Lesson G: Graphing Linear Functions Using Slope</b> .....	361
What does the graph of a linear function in the form $y = mx$ look like?	
<b>Lesson H: Graphing Linear Functions Using Intercepts</b> .....	371
How does changing the y-intercept of a linear function affect its graph?	
<b>Lesson I: Applications of Linear Functions</b> .....	381
When a linear function describes a real-world relationship, what do the slope and the y-intercept represent?	
<b>Lesson J: Nonlinear Functions</b> .....	391
How are nonlinear functions different from linear functions?	

## Unit 5 – Measurement

<b>Lesson A: Measuring Length</b> .....	401
What does it mean to measure to the nearest unit?	
<b>Lesson B: Units of Length</b> .....	411
What strategies can you use to convert measurements from one unit to another?	
<b>Lesson C: Measuring on the Coordinate Grid</b> .....	421
How can you determine the length of a line segment on a coordinate grid?	
<b>Lesson D: Measuring Angles</b> .....	431
How are angles measured?	
<b>Lesson E: Perpendicular and Parallel Lines</b> .....	441
How can you describe the ways two lines meet?	
<b>Lesson F: Complements and Supplements</b> .....	451
What is the relationship between complementary and supplementary angles?	
<b>Lesson G: Drawing Triangles</b> .....	461
What features define different types of triangles?	
<b>Lesson H: Discovering the Pythagorean Theorem</b> .....	471
What makes a right triangle special?	
<b>Lesson I: Using the Pythagorean Theorem</b> .....	481
How can you find the length of the hypotenuse of a right triangle?	
<b>Lesson J: The Legs of a Right Triangle</b> .....	491
How can you find the length of a missing leg of a right triangle?	

## Unit 6 – Data and Statistics

<b>Lesson A: Surveying</b> .....	501
How can you accurately survey a population?	
<b>Lesson B: Frequency Tables and Line Plots</b> .....	511
How do you interpret frequency tables and line plots?	
<b>Lesson C: Histograms</b> .....	521
How is data represented in a histogram?	
<b>Lesson D: Stem-and-Leaf Plots and Mode</b> .....	531
How is a stem-and-leaf plot used?	
<b>Lesson E: Mean</b> .....	541
What is the mean of a set of data?	
<b>Lesson F: Median</b> .....	551
What is a median?	
<b>Lesson G: Box-and-Whisker Plots</b> .....	561
How can you use data to create a box-and-whisker plot?	
<b>Lesson H: Which Measure Is Best?</b> .....	571
How do you determine whether to use the mean, median, or mode to represent data?	
<b>Lesson I: Interpreting Scatter Plots</b> .....	581
How can you interpret the relationship between two sets of data using a scatter plot?	
<b>Lesson J: Creating Scatter Plots</b> .....	591
How do you create a scatter plot from a data table?	