# Contents

## 1 Whole Numbers

1.1 Place Value and Names for Numbers  3  
1.2 Addition with Whole Numbers, and Perimeter  13  
1.3 Rounding Numbers, Estimating Answers, and Displaying Information  25  
1.4 Subtraction with Whole Numbers  35  
1.5 Multiplication with Whole Numbers, and Area  47  
1.6 Division with Whole Numbers  65  
1.7 Exponents and Order of Operations  79  
Chapter 1 Summary  87  
Chapter 1 Test  89  

## 2 Fractions 1: Multiplication and Division

2.1 The Meaning and Properties of Fractions  93  
2.2 Mixed-Number Notation  105  
2.3 Prime Numbers, Factors, and Simplifying Fractions and Mixed Numbers  115  
2.4 Multiplication with Fractions, Mixed Numbers and the Area of a Triangle  121  
2.5 Division with Fractions and Mixed Numbers  133  
Chapter 2 Summary  141  
Chapter 2 Test  143  

## 3 Fractions 2: Addition and Subtraction

3.1 Least Common Multiple  147  
3.2 Addition and Subtraction with Fractions  153  
3.3 Addition and Subtraction with Mixed Numbers  165  
3.4 Exponents and Order of Operations with Fractions  175  
3.5 Complex Fractions  181  
Chapter 3 Summary  185  
Chapter 3 Test  188  

BCM_TOC_CS4.indd   5
7/1/14   2:07 PM
4 Decimals 191

4.1 Decimal Notation and Place Value 193
4.2 Addition and Subtraction with Decimals 201
4.3 Multiplication with Decimals 211
4.4 Division with Decimals 221
4.5 Fractions and Decimals 233
4.6 Square Roots and the Pythagorean Theorem 241

Chapter 4 Summary 253
Chapter 4 Test 255

5 Ratio and Proportion 257

5.1 Ratios 259
5.2 Rates and Unit Pricing 269
5.3 Solving Equations by Division 275
5.4 Proportions 279
5.5 Applications of Proportions 287
5.6 Similar Figures 293

Chapter 5 Summary 303
Chapter 5 Test 305

6 Percent 307

6.1 Percents, Decimals, and Fractions 309
6.2 Basic Percent Problems 321
6.3 General Applications of Percent 331
6.4 Sales Tax and Commission 337
6.5 Percent Increase or Decrease and Discount 343
6.6 Interest 351

Chapter 6 Summary 359
Chapter 6 Test 361
10 Real Numbers  521

10.1 Positive and Negative Numbers  523
10.2 Addition with Negative Numbers  531
10.3 Subtraction with Negative Numbers  339
10.4 Multiplication with Negative Numbers  349
10.5 Division with Negative Numbers  559
Chapter 10 Summary  567
Chapter 10 Test  568

11 Solving Equations  569

11.1 The Distributive Property and Algebraic Expressions  571
11.2 The Addition Property of Equality  581
11.3 The Multiplication Property of Equality  589
11.4 Linear Equations in One Variable  595
11.5 Applications  605
11.6 Evaluating Formulas  621
Chapter 11 Summary  631
Chapter 11 Test  633