

# Table of Contents

<b>Unit 1: Number Sense, Concepts, and Operations</b> .....	1
Unit Focus .....	1
Vocabulary .....	3
Introduction .....	11
<b>Lesson One Purpose</b> .....	11
Writing Whole Numbers .....	13
Special Numbers—Perfect Squares .....	15
Practice .....	16
Powers of 10 .....	18
Exponential Form .....	19
Practice .....	21
Using Square Roots .....	25
Practice .....	27
Evaluating Algebraic Expressions—Order of Operations .....	30
Practice .....	33
<b>Lesson Two Purpose</b> .....	37
Variables and Expressions .....	37
Practice .....	40
Evaluating Expressions .....	42
Practice .....	43
<b>Lesson Three Purpose</b> .....	48
Solving Equations by Guessing .....	48
Practice .....	50
Properties .....	51
Practice .....	52
Solving One-Step Equations .....	55
Practice .....	57
<b>Lesson Four Purpose</b> .....	61
Negative Numbers .....	61
Adding Numbers by Using a Number Line .....	62
Practice .....	64
Graph of a Number .....	65
Practice .....	66
Opposites and Absolute Value .....	68
Adding Positive and Negative Integers .....	70
Practice .....	72

Subtracting Integers .....	75
Practice .....	77
Multiplying Integers .....	80
Practice .....	81
Dividing Integers .....	84
Practice .....	87
<b>Lesson Five Purpose</b> .....	92
Comparing and Ordering Numbers .....	92
Practice .....	94
Solving Inequalities .....	96
Practice .....	98
Unit Review Part A .....	102
Unit Review Part B .....	106
<b>Unit 2: Measurement</b> .....	109
Unit Focus .....	109
Vocabulary .....	111
Introduction .....	121
<b>Lesson One Purpose</b> .....	121
Decimals and Fractions .....	122
Practice .....	126
Comparing Fractions and Decimals .....	131
Practice .....	135
Renaming Fractions and Mixed Numbers .....	138
Practice .....	143
Adding and Subtracting Fractions .....	146
Practice .....	155
Multiplying and Dividing Fractions .....	157
Practice .....	161
Adding and Subtracting Decimals .....	169
Practice .....	170
Multiplying and Dividing Decimals .....	175
Practice .....	178
<b>Lesson Two Purpose</b> .....	181
Writing Numbers in Scientific Notation .....	182
Practice .....	184
Ratios and Rates .....	186
Practice .....	189
Writing and Solving Proportions .....	192
Practice .....	195

Using Proportions .....	199
Practice .....	201
<b>Lesson Three Purpose</b> .....	205
Percents .....	206
Practice .....	209
Solving Percent Problems with Equations .....	215
Using What We Know to Examine Percent Equations .....	220
Practice .....	222
Discount and Sales Tax .....	225
Practice .....	227
Interest .....	232
Practice .....	235
Percent of Increase or Decrease .....	237
Practice .....	239
Unit Review Part A .....	245
Unit Review Part B .....	249
<b>Unit 3: Algebraic Thinking</b> .....	255
Unit Focus .....	255
Vocabulary .....	257
Introduction .....	265
<b>Lesson One Purpose</b> .....	265
Solving Equations .....	266
Practice .....	268
Interpreting Words and Phrases .....	271
Practice .....	272
Solving Two-Step Equations .....	274
Practice .....	276
Special Cases .....	280
Practice: .....	284
<b>Lesson Two Purpose</b> .....	288
The Distributive Property .....	288
Practice .....	292
Simplifying Expressions .....	294
Practice .....	296
Equations with Like Terms .....	299
Practice .....	301
Putting It All Together .....	306
Practice .....	309

<b>Lesson Three Purpose</b> .....	314
Solving Equations with Variables on Both Sides .....	314
Practice .....	317
Problems That Lead to Equations .....	321
Practice .....	323
<b>Lesson Four Purpose</b> .....	339
Graphing Inequalities on a Number Line .....	339
Practice .....	343
Solving Inequalities .....	345
Practice .....	348
Unit Review .....	357
<b>Unit 4: Geometry and Spatial Sense</b> .....	365
Unit Focus .....	365
Vocabulary .....	367
Introduction .....	383
<b>Lesson One Purpose</b> .....	383
Geometric Basics .....	384
Practice .....	387
Measuring and Classifying Angles .....	392
Practice .....	398
More Special Angles .....	403
Practice .....	408
Exploring Parallel Lines .....	413
Practice .....	417
Angles Formed by a Transversal .....	419
Practice .....	421
<b>Lesson Two Purpose</b> .....	424
Triangles .....	424
Classifying Triangles .....	426
Practice .....	428
Similar Figures .....	432
Practice .....	439
The Coordinate System .....	443
Practice .....	446
Pythagorean Theorem .....	451
Practice .....	455
Problem Solving with the Pythagorean Theorem .....	457
Practice .....	458

<b>Lesson Three Purpose</b> .....	461
Polygons .....	462
Symmetry .....	463
Practice .....	465
Perimeter of Polygons .....	470
Practice .....	474
Finding Areas of Special Shapes .....	478
Practice .....	486
Circles .....	493
Practice .....	495
Circumference .....	496
Practice .....	500
<b>Lesson Four Purpose</b> .....	506
Volume .....	506
Practice .....	512
Surface Area of Three-Dimensional Shapes .....	520
Practice .....	528
Problem Solving .....	532
Practice .....	533
Unit Review Part A .....	548
Unit Review Part B .....	552
<b>Unit 5: Data Analysis and Probability</b> .....	559
Unit Focus .....	559
Vocabulary .....	561
Introduction .....	571
<b>Lesson One Purpose</b> .....	571
Equations in Two Variables .....	573
Practice .....	578
Graphing Linear Equations .....	582
Practice .....	586
Interpreting Data and Lines of Best Fit .....	591
Practice .....	593
Slope .....	602
Practice .....	607
Graphing Inequalities .....	612
Practice .....	616

<b>Lesson Two Purpose</b> .....	619
Sequences .....	619
Practice .....	621
Investigating Patterns in Polygons .....	624
Practice .....	626
<b>Lesson Three Purpose</b> .....	632
Tree Diagrams .....	632
Practice .....	635
Probability .....	638
Practice .....	640
Probability of Independent Events .....	645
Practice .....	647
Probability of Dependent Events .....	650
Practice .....	652
<b>Lesson Four Purpose</b> .....	657
Measures of Central Tendency—Mean, Median, and Mode .....	657
Practice .....	662
Unit Review .....	668
<b>Appendices</b> .....	679
Appendix A: Table of Squares and Approximate Square Roots .....	681
Appendix B: Mathematical Symbols .....	683
Appendix C: Mathematics Reference Sheet .....	685
Appendix D: Graph Paper .....	687
Appendix E: Index .....	689