



# Pre-Algebra

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STANDARDS		PAGE REFERENCES
<b>GRADE 7</b>		
<b>Standard 1: Number and Operation</b>		
Students in Grade 7 read, write, compare, order, and place on a number line: rational numbers, including integers, fractions, and decimals, and absolute values. Students solve problems requiring the conversion between simple decimals, fractions, and percents. Students add, subtract, multiply, and divide whole numbers, fractions, and decimals and students evaluate numerical expressions using the order of operations with whole numbers and decimals. Students explain when estimation is appropriate and describe the usefulness of an estimate as opposed to an exact answer.		
<b>Goal 1.1: Understand and use numbers.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.1.1.1	Compare magnitudes and relative magnitudes of rational numbers, including integers, fractions, and decimals. (327.01.a , 327.01.c)	<b>Student Edition:</b> 175-179, 185 #6-#8, 761 #9
7.M.1.1.2	Solve problems requiring the conversion between simple decimals, fractions, ratios, and percents. (327.01.b)	<b>Student Edition:</b> 200-204, 206, 208-209, 214 #60-#63, 264-268, 281-285, 293-297, 302 #56-#61 <i>Reading Mathematics</i> 269 <b>Teacher Wraparound Edition:</b> A 285; DI 282; ELL 198F; IE 201, 206, 283; PC 262F

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7.M.1.1.3	Locate the position of rational numbers on a number line. (327.01.e)	<p><b>Student Edition:</b> 58, 60 #67-#70, #72, 143 #20, 203 #44, 209 #52, 293</p> <p><b>Teacher Wraparound Edition:</b> DI 59, 66</p>
7.M.1.1.4	Rewrite multiple factors using exponents. (327.02.c)	<p><b>Student Edition:</b> 153-157, 161, 175-179, 186-190, 195, 197 #18, #20, 731</p> <p><b>Teacher Wraparound Edition:</b> DI 155; IE 154, 176</p>
7.M.1.1.5	Apply the number theory concepts of primes, composites, and prime factorization and find the Least Common Multiple (LCM) and the Greatest Common Factor (GCF). (327.01.d)	<p><b>Student Edition:</b> 159-163, 164-168, 173 #58-#61, 192, 193, 196, 226-230, 236, 257, 261 #20, 285 #63-#65 <i>Algebra Activity</i> 231 <i>Reading Mathematics</i> 225</p> <p><b>Teacher Wraparound Edition:</b> DI 161, 165, 228; IE 160, 165, 227</p>
7.M.1.1.6	Recognize pertinent information for problem solving. (328.01.b)	<p><b>Student Edition:</b> 6-10, 15 #49-#50, 53 #18, 88 #49, 135 #35, #36, 203 #46, #47, 301 #41, 417 #24-#26, 489 #24, 706-709 <i>Algebra Activity</i> 237, 309, 656-657 <i>Geometry Activity</i> 583 <i>WebQuest</i> 145</p>
7.M.1.1.7	Describe the use of integers in real-world situations.	<p><b>Student Edition:</b> 56-57, 60 #67-#70, 67 #41, 68 #46-#47, 71 #3, 73 #54, 78 #54, #55, 83 #36, 95 #13, #16, 142 #5</p> <p><b>Teacher Wraparound Edition:</b> DI 59; IE 57; PS 73, 259</p>
7.M.1.1.8	Use appropriate vocabulary.	<p><b>Student Edition:</b> 341 <i>Key Vocabulary</i> 146 <i>Reading Mathematics</i> 56, 57, 148, 149, 206 <i>Reading Mathematics</i> 69, 174, 225 <i>Study Tip</i> 155, 164, 186, 226 <i>Vocabulary</i> 153, 159</p> <p><b>Teacher Wraparound Edition:</b> VB 54, 96, 146</p>

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Goal 1.2: Perform computations accurately.		
Objective(s): By the end of Grade 7, the student will be able to:		
7.M.1.2.1	Recall the common equivalent fractions, decimals, and percents of halves, fourths, and tenths.	<b>Student Edition:</b> 200-204, 281-285, 293-297, 318, 319 <b>Teacher Wraparound Edition:</b> A 204; ELL 198F; IE 201, 282, 283
7.M.1.2.2	Add, subtract, multiply, and divide whole numbers, fractions and decimals; and add, multiply, and divide integers. (327.02.a, 327.02.d)	<b>Student Edition:</b> 6-10, 64-68, 75-79, 80-84, 210-214, 215-219, 220-224, 232-236, 255-257, 323 #11, 713, 715, 761, 762 <i>Algebra Activity</i> 62-63 <i>WebQuest</i> 145 <b>Teacher Wraparound Edition:</b> DI 65; IE 76, 81, 211, 221; PS 93, 259
7.M.1.2.3	Evaluate whole numbers in exponential form.	<b>Student Edition:</b> 156 #48, 186-190, 194 #62, #65, 195 #30, 197 #21, 204 #52, #55, 761 #10-#15 <b>Teacher Wraparound Edition:</b> A 190; DI 187; IE 187
7.M.1.2.4	Evaluate numerical expressions using the order of operations with whole numbers and decimals. (327.02.b)	<b>Student Edition:</b> 12-16, 21 #55-#57 <b>Teacher Wraparound Edition:</b> A 16
7.M.1.2.5	Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three. (327.02.e)	<b>Student Edition:</b> 8-10, 25 #2, 38 #50-#52, 74 #61-#64, 102 #56-#63, 150 #3, 200 #1, 525 #37-#39 <i>Study Tip</i> 122, 282 <b>Teacher Wraparound Edition:</b> DI 29, 150; TNT 374
7.M.1.2.6	Use a variety of strategies including common mathematical formulas to compute problems drawn from real life situations. (328.01.a)	<b>Student Edition:</b> 6-10, 75, 83 #34-#36, 131-136, 157 #65, 240 #5, 249-252, 706, 708, 709, 758 <i>Algebra Activity</i> 253 <i>Study Tip</i> 6 <i>WebQuest</i> 3, 145 <b>Teacher Wraparound Edition:</b> DI 250; PC 146F; TNT 10

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7.M.1.2.7	Use appropriate vocabulary and notations. (327.02.f)	<b>Student Edition:</b> 8, 23-24, 249-250, 706-709 <i>Reading Math</i> 149, 177, 205 <i>Reading Mathematics</i> 69 <i>Study Tip</i> 186, 187, 216
<b>Goal 1.3: Estimate and judge reasonableness of results.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.1.3.1	Estimate to predict computation results. (327.03.a)	<b>Student Edition:</b> 8, 43 #19, 187 #3, 220, 221, 234 #6, 294-297 <i>Algebra Activity</i> 275 <i>WebQuest</i> 145 <b>Teacher Wraparound Edition:</b> DI 294; IE 294
7.M.1.3.2	Explain when estimation is appropriate and describe the usefulness of an estimate as opposed to an exact answer. (327.03.b)	<b>Student Edition:</b> 9 #1, #21, 127 #3, 152 #55, 223 #45, 229 #42, 295 #3, 296 #40-#42, 297 #44, 586 #3, 684 #3, 774 #4 <i>Algebra Activity</i> 275 <i>WebQuest</i> 145
7.M.1.3.3	Identify whether a given estimate is an overestimate or underestimate. (327.03.c)	<b>Student Edition:</b> 167 #54, 223 #45, 229 #42, 539 #38, 586 #3, 774 #4 <i>Reading Mathematics</i> 589 <i>WebQuest</i> 145
7.M.1.3.4	Use a four-function calculator to solve complex grade-level problems.	<b>Student Edition:</b> <i>Graphing Calculator Investigation</i> 45-46, 243, 374, 402-403, 482, 622, 629
7.M.1.3.5	Formulate conjectures and discuss why they must be or seem to be true. (328.02.c)	<b>Student Edition:</b> 6-10, 38 #49, 151 #50, #51, 155 #3, 204 #48, 219 #52, 494 #30 <i>Algebra Activity</i> 275 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> DI 25, 534

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7.M.1.3.6	Use appropriate vocabulary and notations. (327.03.d)	<b>Student Edition:</b> <i>Algebra Activity</i> 275 <i>Reading Math</i> 57 <i>Reading Mathematics</i> 269 <i>Study Tip</i> 7, 28, 82, 298 Note: Also see the inside back cover of the text for symbols.
<b>Standard 2: Concepts and Principles of Measurement</b>		
Students in Grade 7 select and use appropriate units and tools to make formal measurements in both systems. Students apply given formulas for perimeter, circumference, or area of triangles, circles, and quadrilaterals. Students solve problems involving perimeter and area of rectangles and squares. Students compare units and explain their relationship to one another and to real world applications.		
<b>Goal 2.1: Understand and use U.S. customary and metric measurements.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.2.1.1	Select and use appropriate units and tools to make formal measurements in both systems. (329.01.a)	<b>Student Edition:</b> 71 #3, 177 #12, 182 #3, 183 #13, 184 #44, 189 #40, 207 #11, 228 #15, 262 #43, 590-594, 718-719, 720-721, 734 <b>Teacher Wraparound Edition:</b> DI 534
7.M.2.1.2	Apply estimation of measurement to real-world and content problems using standard measuring devices. (329.01.b)	<b>Student Edition:</b> 71 #3, 187 #3, 229 #42, 356 #3, 396 #8, 590-594 <i>WebQuest</i> 145
7.M.2.1.3	Explain the differences between perimeter, area, and volume (capacity) and their measures within both systems. (329.01.c)	<b>Student Edition:</b> 131-136, 141 #21, #22, 143 #19, 152 #60, #61, 157 #55-#57, 224 #59, 349 #56, 730 #7-#10 <i>Algebra Activity</i> 518-519 <i>Geometry Activity</i> 562 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> IE 132, 133
7.M.2.1.4	Given the formulas, find the perimeter, circumference, or area of triangles, circles, and quadrilaterals. (331.01.e)	<b>Student Edition:</b> 132-136, 143 #19, 247 #49, 349 #56, 520-525, 533-538, 547, 548, 749 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> A 136; IE 132

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7.M.2.1.5	Convert units of measurement within each system. (329.01.e)	<b>Student Edition:</b> 118 #48, 172 #29, #42-#44, 189 #44-#46, 213 #34-#37, 214 #49-#52, 263, 266 #12, #13, 272 #4, 397 #19, 718-719, 720-721, 734
7.M.2.1.6	Solve problems involving perimeter and area of rectangles and triangles. (329.01.d)	<b>Student Edition:</b> 131-136, 143 #19, 280 #25, 337 #35, 349 #55, #56, 520-525 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> DI 137
7.M.2.1.7	Use appropriate vocabulary and notations. (329.01.f)	<b>Student Edition:</b> 89 #52, 118 #47, 157 #56, 182 #3, 183 #13, 184 #44, 207 #11 <i>Reading Mathematics</i> 526 <i>Vocabulary</i> 138, 544 <b>Teacher Wraparound Edition:</b> T 526
<b>Goal 2.2: Apply the concepts of rates, ratios, and proportions.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.2.2.1	Explain rates and their relationship to ratios, and use proportions to solve problems represented with a diagram. (329.02.a, 329.03.a)	<b>Student Edition:</b> 123 #47, 135 #42, 264-268, 270-274, 276-280, 316, 317 <i>Algebra Activity</i> 269 <i>Reading Mathematics</i> 275 <b>Teacher Wraparound Edition:</b> A 280; IE 277
7.M.2.2.2	Reduce rates to unit rates.	<b>Student Edition:</b> 264-267, 316, 323 #14, 359 #58-#61, 783 #20 <b>Teacher Wraparound Edition:</b> A 268
<b>Goal 2.3: Apply dimensional analysis.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.2.3.1	Identify properly constructed dimensional analysis conversions. (329.04.a)	<b>Student Edition:</b> 212-214, 217 #6, 266 #4, 267 #38-#45, 280 #29, #30 <b>Teacher Wraparound Edition:</b> DI 211; IE 265

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<b>Standard 3: Concepts and Language of Algebra and Functions</b>		
Students in Grade 7 use variables in simple expressions and equations and students use symbols “<,” “>,” “=,” “≠,” “≤,” and “≥” to express relationships. Students use the order of operations in evaluating simple algebraic expressions and students solve one-step equations. Students extend patterns involving rational numbers and describe the rule that generates the pattern.		
<b>Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.3.1.1	Use variables in simple expressions and equations. (330.01.a)	<b>Student Edition:</b> 17-21, 28-32, 48, 49, 113 #43, #44, 116 #2, 129 #20-#24, 143 #21 <i>Reading Mathematics</i> 125 <b>Teacher Wraparound Edition:</b> PS 141
7.M.3.1.2	Translate simple word statements into algebraic expressions and equations. (330.01.b)	<b>Student Edition:</b> 17-21, 32 #63, #64, 53 #16, 74 #65-#68, 105, 126-130, 143 #21 <i>Reading Mathematics</i> 11, 125 <b>Teacher Wraparound Edition:</b> IE 18
7.M.3.1.3	Use symbols “<,” “>,” “=,” “≠,” “≤,” and “≥” to express relationships. (330.01.c)	<b>Student Edition:</b> 28, 59, 60, 203, 229, 276-278, 340-344, 345-349, 353, 355-359, 373, 710 <i>Reading Mathematics</i> 339 <i>Study Tip</i> 28
<b>Goal 3.2: Evaluate algebraic expressions.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.3.2.1	Evaluate simple numeric and algebraic expressions using commutative, associative, identity, zero, inverse, distributive, and substitution properties. (330.02.a)	<b>Student Edition:</b> 23-27, 49, 52 #5, 61 #81-#83, 77 #5, #13, #14, 83 #26-#31, 98-102, 104 #1, 105 #3, 107 #57, 111 #2, 114 #58-#60, 132 #3, 209 #66-#69, 215, 216, 379, 413 #37-#42 <i>Algebra Activity</i> 62-63 <i>Practice Quiz</i> 32, 74 <b>Teacher Wraparound Edition:</b> A 27; IE 24, 99

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7.M.3.2.2	Use the order of operations in evaluating simple algebraic expressions. (330.02.b)	<b>Student Edition:</b> 12-16, 18 #2, 21 #55-#57, 32 #65, #66, 48, 51 #3-#5, 53 #14, 147 #9-#16, 154, 192, 401 #46-#51, 464 #50-#52 <i>Teaching Tip</i> 24 <b>Teacher Wraparound Edition:</b> IE 13, 18; PS 93
<b>Goal 3.3: Solve algebraic equations and inequalities.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.3.3.1	Solve one-step equations. (330.03.a)	<b>Student Edition:</b> 28-32, 38 #50-#52, 110-114, 115-119, 124 #54-#59, 130 #30-#32, 136 #47-#49, 139 <i>Algebra Activity</i> 108-109 <b>Teacher Wraparound Edition:</b> A 114; DI 116; IE 29, 111, 116
<b>Goal 3.4: Understand the concept of functions.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.3.4.1	Extend patterns involving rational numbers and describe the rule that generates the pattern. (333.01.a)	<b>Student Edition:</b> 7, 9, 16, 47-48, 74 #57, 167 #53, 249-252, 323 #12 <i>Algebra Activity</i> 253 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> DI 79; IE 250
7.M.3.4.2	Explain how a change in one quantity impacts a change in another quantity. (333.01.b)	<b>Student Edition:</b> 369-373, 379 #51, 393-397, 424, 426, 429 #12, 431 #18 <i>Algebra Activity</i> 368, 392 <i>Graphing Calculator Investigation</i> 374 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> DI 371, 395; IE 370, 394
7.M.3.4.3	Use appropriate vocabulary and notations. (333.01.c)	<b>Student Edition:</b> 249-250 <i>Algebra Activity</i> 253, 368 <i>Reading Mathematics</i> 380 <i>Vocabulary</i> 366 <b>Teacher Wraparound Edition:</b> IE 370; T 380

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<b>Goal 3.5: Represent equations, inequalities and functions in a variety of formats.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.3.5.1	Represent a simple set of data in a table, as a graph, and as a mathematical relationship. (333.02.a)	<b>Student Edition:</b> 35 #4, 42 #3, 249, 261 #23, 343 #41, #42, 350, 369, 371 #10, #11, 372 #24-#27, #28, #29, 391 #26, #27, 418 #7 <i>Algebra Activity</i> 275 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> DI 373, 385; IE 399; PS 429
<b>Goal 3.6: Apply functions to a variety of problems.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.3.6.1	Use patterns and linear functions to represent and solve simple problems. (333.03.a)	<b>Student Edition:</b> 687-691, 696 #42, 700, 701, 757 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> A 691; DI 688; IE 689
<b>Standard 5: Data Analysis, Probability, and Statistics</b>		
<p>Students in the Grade 7 read and interpret tables, charts, and graphs, including frequency tables, scatter plots, line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. Students collect, organize and display data with appropriate notation in tables, charts and graphs, including scatter plots, line graphs, line plots, bar graphs, and stem-and-leaf plots. Students determine the measures of central tendency – mean, median and mode – with sets of data and students predict, perform, and record results of simple probability experiments.</p>		
<b>Goal 5.1: Understand data analysis.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.5.1.1	Read and interpret tables, charts, and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. (332.01.a)	<b>Student Edition:</b> 35-37, 40-44, 53 #18, 95 #11, 179 #63, 203 #46, #47, 431 #21, 617-621, 622-628, 633 #15, 658, 659, 722-723 <i>Algebra Activity</i> 39, 237 <i>Graphing Calculator Investigation</i> 44-45 <i>WebQuest</i> 325, 603 <b>Teacher Wraparound Edition:</b> DI 611; IE 35, 41, 607, 608, 618; PS 663

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7.M.5.1.2	Explain conclusions drawn from tables, charts, and graphs. (332.01.b)	<b>Student Edition:</b> 37 #28-#30, 179 #63, 203 #46, #47, 213 #46, #47, 431 #21, 610 #18-#21, 722-723 <i>Algebra Activity</i> 39, 180, 237, 275, 309, 386 <i>WebQuest</i> 3, 603
7.M.5.1.3	Use appropriate vocabulary and notations. (332.01.c)	<b>Student Edition:</b> 34, 40, 606, 612, 617, 623 <i>Algebra Activity</i> 309 <i>Reading Mathematics</i> 634
<b>Goal 5.2: Collect, organize, and display data.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.5.2.1	Collect, organize, and display data with appropriate notation in tables, charts and graphs, including scatter plots, broken line graphs, line plots, bar graphs, and stem-and-leaf plots. (332.02.a)	<b>Student Edition:</b> 107 #64, 412 #14-#17, 418 #7, 606-611, 665 #20, 722-723 <i>Algebra Activity</i> 39, 237, 275 <i>Graphing Calculator Investigation</i> 44-45, 622, 629 <i>WebQuest</i> 3, 325, 603 <b>Teacher Wraparound Edition:</b> DI 619; IE 618; PS 663
<b>Goal 5.3: Apply simple statistical measurements.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.5.3.1	Determine the measures of central tendency – mean, median and mode – with sets of data. (332.03.a)	<b>Student Edition:</b> 238-242, 261 #23, 605, 607 #2, 608 #6, 613 #2, 614 #7, 615 #19, 616, 735 <i>Algebra Activity</i> 237 <i>Graphing Calculator Investigation</i> 243 <i>WebQuest</i> 145, 242 <b>Teacher Wraparound Edition:</b> DI 613; IE 81, 239, 240, 607
7.M.5.3.2	Discuss distribution of data, including range, frequency, gaps, and clusters. (332.03.b)	<b>Student Edition:</b> 35-37, 44, 136 #53, 612-616, 627 <i>Graphing Calculator Investigation</i> 629 <i>Practice Quiz</i> 628 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> IE 613, 614

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<b>Goal 5.4: Understand basic concepts of probability.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.5.4.1	Predict, perform, and record results of simple probability experiments. (332.04.a)	<b>Student Edition:</b> 310-314, 320, 333 #42, 338 #45 <i>Algebra Activity</i> 309
7.M.5.4.2	Recognize equally likely outcomes. (332.04.c)	<b>Student Edition:</b> 310-314, 320, 323 #17, 637 #4-#8, 638 #10-#19, 661, 663 <i>Algebra Activity</i> 640 <i>Practice Quiz</i> 645 <b>Teacher Wraparound Edition:</b> IE 636, 642
7.M.5.4.3	Explain that probability ranges from impossible to certain (0% to 100%).	<b>Student Edition:</b> 310, 311, 312 #1, #3 <b>Teacher Wraparound Edition:</b> DI 311; IE 311
7.M.5.4.4	Use the language of probability. (332.04.b)	<b>Student Edition:</b> 310, 311, 636 <i>Algebra Activity</i> 309 <i>Graphing Calculator Investigation</i> 315 <i>Vocabulary</i> 316
<b>Goal 5.5: Make predictions or decisions based on data.</b>		
<b>Objective(s): By the end of Grade 7, the student will be able to:</b>		
7.M.5.5.1	Make predictions based on simple theoretical probabilities. (332.05.a)	<b>Student Edition:</b> 310-314, 646-649 <i>Algebra Activity</i> 656-657 <i>Graphing Calculator Investigation</i> 315
7.M.5.5.2	Use appropriate vocabulary and notations. (332.05.b)	<b>Student Edition:</b> 310, 311, 636, 646 <i>Study Tip</i> 310

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<b>GRADE 8</b>		
<b>Standard 1: Number and Operation</b>		
Students in Grade 8 read, write, compare, order, and place on a number line rational numbers, including integers, fractions, decimals, and percents, and absolute values. Students use rational numbers, including percents and ratios, and $\pi$ (pi) to solve problems. Students convert between standard form, scientific notation, and exponential form. Students add, subtract, multiply, and divide rational numbers and students recall the common equivalent fractions, decimals, and percents of halves, thirds, fourths, fifths, and tenths. Students evaluate numerical expressions with rational numbers using the order of operations and students evaluate numerical expressions with whole number exponents. Students estimate to predict computation results.		
<b>Goal 1.1: Understand and use numbers.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.1.1.1	Compare magnitudes and relative magnitudes of rational numbers, including integers, fractions, decimals, percents, and absolute values. (337.01.a)	<b>Student Edition:</b> 175-179, 185 #6-#8, 761 #9
8.M.1.1.2	Use rational numbers, including percents and ratios, and $\pi$ (pi) to solve problems. (337.01.b)	<b>Student Edition:</b> 200-204, 206, 208-209, 214 #60-#63, 264-268, 281-285, 293-297, 302 #56-#61, 533-538 <i>Reading Mathematics</i> 269 <b>Teacher Wraparound Edition:</b> A 285; DI 282; ELL 198F; IE 201, 206, 283, 534; PC 262F
8.M.1.1.3	Locate the position of rational numbers and positive real numbers on a number line. (337.01.e)	<b>Student Edition:</b> 58, 60 #67-#70, #72, 143 #20, 203 #44, 209 #52, 293, 442 <b>Teacher Wraparound Edition:</b> DI 59, 66
8.M.1.1.4	Convert between standard form, scientific notation, and exponential form. (337.01.c)	<b>Student Edition:</b> 153-157, 175-179, 186-190, 194, 195, 197 #18, #20, #21, 204 #52-#55, 209 #58-#61, 268 #61-#64, 733 <b>Teacher Wraparound Edition:</b> A 190; DI 155, 187; IE 154, 176

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8.M.1.1.5	Apply number theory concepts (primes, composites, prime factorization, LCM, GCF). (337.01.d)	<b>Student Edition:</b> 159-163, 164-168, 173 #58-#61, 192, 193, 196, 226-230, 236, 257, 261 #20, 285 #63-#65 <i>Algebra Activity</i> 231 <i>Reading Mathematics</i> 225	<b>Teacher Wraparound Edition:</b> DI 161, 165, 228; IE 160, 165, 227
8.M.1.1.6	Recognize pertinent information for problem solving. (338.01.b)	<b>Student Edition:</b> 6-10, 15 #49-#50, 53 #18, 88 #49, 135 #35, #36, 203 #46, #47, 301 #41, 417 #24-#26, 489 #24, 706-709 <i>Algebra Activity</i> 237, 309, 656-657 <i>Geometry Activity</i> 583 <i>WebQuest</i> 145	
8.M.1.1.7	Apply integers in one- and two-step common real-world situations.	<b>Student Edition:</b> 56-57, 60 #67-#70, 67 #41, 68 #46-#47, 71 #3, 73 #54, 78 #54, #55, 83 #36, 95 #13, #16, 142 #5	<b>Teacher Wraparound Edition:</b> DI 59; IE 57; PS 73, 259
8.M.1.1.8	Use appropriate vocabulary.	<b>Student Edition:</b> 341 <i>Key Vocabulary</i> 146 <i>Reading Math</i> 56, 57, 148, 149, 206 <i>Reading Mathematics</i> 69, 174, 225 <i>Study Tip</i> 155, 164, 186, 226 <i>Vocabulary</i> 153, 159	<b>Teacher Wraparound Edition:</b> VB 54, 96, 146
<b>Goal 1.2: Perform computations accurately.</b>			
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>			
8.M.1.2.1	Recall the common equivalent fractions, decimals, and percents of halves, thirds, fourths, fifths, and tenths. (337.02.b)	<b>Student Edition:</b> 200-204, 281-285, 293-297, 318, 319	<b>Teacher Wraparound Edition:</b> A 204; ELL 198F; IE 201, 282, 283

STANDARDS		PAGE REFERENCES
8.M.1.2.2	Add, subtract, multiply, and divide rational numbers. (337.02.a)	<p><b>Student Edition:</b> 6-10, 64-68, 75-79, 80-84, 210-214, 215-219, 220-224, 232-236, 255-257, 323 #11, 713, 715, 761, 762 <i>Algebra Activity</i> 62-63 <i>WebQuest</i> 145</p> <p><b>Teacher Wraparound Edition:</b> DI 65; IE 76, 81, 211, 221; PS 93, 259</p>
8.M.1.2.3	Evaluate numerical expressions with whole number exponents. (337.02.d)	<p><b>Student Edition:</b> 156 #28-#42, #49-#51, 168 #71, 183 #11, #12, #40-#43, 204 #60, 268 #64</p>
8.M.1.2.4	Evaluate numerical expressions with rational numbers using the order of operations. (337.02.c)	<p><b>Student Edition:</b> 12-16, 21 #55-#57</p> <p><b>Teacher Wraparound Edition:</b> A 16</p>
8.M.1.2.5	Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three. (337.02.e)	<p><b>Student Edition:</b> 8-10, 25 #2, 38 #50-#52, 74 #61-#64, 102 #56-#63, 150 #3, 200 #1, 525 #37-#39 <i>Study Tip</i> 122, 282</p> <p><b>Teacher Wraparound Edition:</b> DI 29, 150; TNT 374</p>
8.M.1.2.6	Use a variety of strategies including common mathematical formulas to compute problems drawn from real life situations. (338.01.a)	<p><b>Student Edition:</b> 6-10, 75, 83 #34-#36, 131-136, 157 #65, 240 #5, 249-252, 706, 708, 709, 758 <i>Algebra Activity</i> 253 <i>Study Tip</i> 6 <i>WebQuest</i> 3, 145</p> <p><b>Teacher Wraparound Edition:</b> DI 250; PC 146F; TNT 10</p>
8.M.1.2.7	Use appropriate vocabulary and notations. (337.02.f)	<p><b>Student Edition:</b> 8, 23-24, 249-250, 706-709 <i>Reading Math</i> 149, 177, 205 <i>Reading Mathematics</i> 69 <i>Study Tip</i> 186, 187, 216</p>

STANDARDS		PAGE REFERENCES
<b>Goal 1.3: Estimate and judge reasonableness of results.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.1.3.1	Estimate to predict computation results. (337.03.a)	<b>Student Edition:</b> 8, 43 #19, 187 #3, 220, 221, 234 #6, 294-297 <i>Algebra Activity</i> 275 <i>WebQuest</i> 145 <b>Teacher Wraparound Edition:</b> DI 294; IE 294
8.M.1.3.2	Identify when estimation is appropriate and apply to problem solving situations. (337.03.b)	<b>Student Edition:</b> 9 #1, #21, 127 #3, 223 #45, 295 #3, 296 #40-#42, 297 #44, 586 #3, 684 #3, 774 #4 <i>Algebra Activity</i> 275
8.M.1.3.3	Identify whether a given estimate is an overestimate or underestimate. (337.03.c)	<b>Student Edition:</b> 167 #54, 223 #45, 229 #42, 539 #38, 586 #3, 774 #4 <i>Reading Mathematics</i> 589 <i>WebQuest</i> 145
8.M.1.3.4	Use a four-function calculator to solve complex grade-level problems.	<b>Student Edition:</b> <i>Graphing Calculator Investigation</i> 45-46, 243, 374, 402-403, 482, 622, 629
8.M.1.3.5	Formulate conjectures and justify (short of formal proof) why they must be or seem to be true. (338.02.c)	<b>Student Edition:</b> 6-10, 38 #49, 151 #50, #51, 155 #3, 204 #48, 219 #52, 494 #30 <i>Algebra Activity</i> 275 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> DI 25, 534
8.M.1.3.6	Use appropriate vocabulary and notations. (337.03.d)	<b>Student Edition:</b> <i>Algebra Activity</i> 275 <i>Reading Math</i> 57 <i>Reading Mathematics</i> 269 <i>Study Tip</i> 7, 28, 82, 298 Note: Also see inside back cover of text for symbols.

STANDARDS		PAGE REFERENCES
<b>Standard 2: Concepts and Principles of Measurement</b>		
Students in Grade 8 select and use appropriate units and tools to make formal measurements in both systems. Students apply given formulas for perimeter, circumference, and area of triangles, circles, and quadrilaterals, and the volume and surface area of rectangular prisms. Students solve problems involving area of circles and the perimeter and area of rectangles and triangles. Students use rates, proportions, ratios, and map scales in problem solving situations.		
<b>Goal 2.1: Understand and use U.S. customary and metric measurements.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.2.1.1	Select and use appropriate units and tools to make formal measurements in both systems. (339.01.a)	<b>Student Edition:</b> 71 #3, 177 #12, 182 #3, 183 #13, 184 #44, 189 #40, 207 #11, 228 #15, 262 #43, 590-594, 718-719, 720-721, 734 <b>Teacher Wraparound Edition:</b> DI 534
8.M.2.1.2	Apply estimation of measurement to real-world and content problems using standard measuring devices. (339.01.b)	<b>Student Edition:</b> 71 #3, 187 #3, 229 #42, 356 #3, 396 #8, 590-594 <i>WebQuest</i> 145
8.M.2.1.3	Compare the differences and relationships among measures of perimeter, area, and volume (capacity) within both systems. (339.01.c)	<b>Student Edition:</b> 131-136, 141 #21, #22, 143 #19, 152 #60, #61, 157 #55-#57, 224 #59, 349 #56, 730 #7-#10 <i>Algebra Activity</i> 518-519 <i>Geometry Activity</i> 562 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> IE 132, 133
8.M.2.1.4	Given the formulas, find the circumference, perimeter, or area of triangles, circles, and quadrilaterals, and the volume and surface area of rectangular prisms. (341.01.e)	<b>Student Edition:</b> 132-136, 143 #19, 247 #49, 349 #56, 520-525, 533-538, 547, 548, 563-567, 573-577, 749 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> A 136; IE 132, 564, 574
8.M.2.1.5	Convert units of measurement within each system in problem solving situations. (339.01.e)	<b>Student Edition:</b> 172 #29, 272 #4, 719 #39-#43, 775 #12

STANDARDS		PAGE REFERENCES
8.M.2.1.6	Solve problems involving area of circles and the perimeter and area of rectangles and triangles. (339.01.d)	<p><b>Student Edition:</b> 131-136, 143 #19, 280 #25, 337 #35, 349 #55, #56, 520-525, 533-538, 548, 749 <i>Spreadsheet Investigation</i> 137</p> <p><b>Teacher Wraparound Edition:</b> DI 137; IE 535</p>
8.M.2.1.7	Use appropriate vocabulary and notations. (339.01.f)	<p><b>Student Edition:</b> 89 #52, 118 #47, 157 #56, 182 #3, 183 #13, 184 #44, 207 #11 <i>Reading Mathematics</i> 526 <i>Vocabulary</i> 138, 544</p> <p><b>Teacher Wraparound Edition:</b> T 526</p>
<b>Goal 2.2: Apply the concepts of rates, ratios, and proportions.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.2.2.1	Use rates, proportions, ratios, and map scales in problem-solving situations. (339.03.a)	<p><b>Student Edition:</b> 123 #47, 135 #42, 264-268, 270-274, 276-280, 292 #32, 316, 317, 472, 473 <i>Algebra Activity</i> 269 <i>Reading Mathematics</i> 275</p> <p><b>Teacher Wraparound Edition:</b> A 280; IE 277</p>
8.M.2.2.2	Determine unit rates in real-world situations.	<p><b>Student Edition:</b> 264-267, 316, 323 #14, 359 #58-#61, 783 #20</p> <p><b>Teacher Wraparound Edition:</b> A 268</p>
<b>Goal 2.3: Apply dimensional analysis.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.2.3.1	Illustrate the interrelationship of measurement units through dimensional analysis conversions. (339.04.a)	<p><b>Student Edition:</b> 212-214, 217 #6, 266 #4, 267 #38-#45, 280 #29, #30</p> <p><b>Teacher Wraparound Edition:</b> DI 211; IE 265</p>

STANDARDS		PAGE REFERENCES
<b>Standard 3: Concepts and Language of Algebra and Functions</b>		
Students in Grade 8 translate simple word statements and story problems into algebraic expressions and equations. Students use the order of operations in evaluating basic algebraic expressions and students solve one- and two-step equations and inequalities. Students represent a set of data in a table, as a graph, and as a mathematical relationship.		
<b>Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.3.1.1	Use variables in expressions, equations, and inequalities. (340.01.a)	<b>Student Edition:</b> 17-21, 28-32, 48, 49, 113 #43, #44, 116 #2, 129 #20-#24, 143 #21, 330-333, 340-344, 345-349, 350-354 <i>Reading Mathematics</i> 125 <b>Teacher Wraparound Edition:</b> IE 341, 346; PS 141
8.M.3.1.2	Translate simple word statements and story problems into algebraic expressions and equations. (340.01.b)	<b>Student Edition:</b> 17-21, 32 #63, #64, 53 #16, 74 #65-#68, 105, 126-130, 143 #21 <i>Reading Mathematics</i> 11, 125 <b>Teacher Wraparound Edition:</b> IE 18
8.M.3.1.3	Use symbols "<," ">," "=", "≠," "≤," and "≥" to express relationships. (340.01.c)	<b>Student Edition:</b> 28, 59, 60, 203, 229, 276-278, 340-344, 345-349, 353, 355-359, 373, 710 <i>Reading Mathematics</i> 339 <i>Study Tip</i> 28
<b>Goal 3.2: Evaluate algebraic expressions.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.3.2.1	Use and apply the following properties in evaluating algebraic expressions: commutative, associative, identity, zero, inverse, distributive, and substitution. (340.02.a)	<b>Student Edition:</b> 23-27, 49, 52 #5, 61 #81-#83, 77 #5, #13, #14, 83 #26-#31, 98-102, 104 #1, 105 #3, 107 #57, 111 #2, 114 #58-#60, 132 #3, 209 #66-#69, 215, 216, 379, 413 #37-#42 <i>Algebra Activity</i> 62-63 <i>Practice Quiz</i> 32, 74 <b>Teacher Wraparound Edition:</b> A 27; IE 24, 99

STANDARDS		PAGE REFERENCES
8.M.3.2.2	Use the order of operations in evaluating simple algebraic expressions. (340.02.b)	<b>Student Edition:</b> 12-16, 18 #2, 21 #55-#57, 32 #65, #66, 48, 51 #3-#5, 53 #14, 147 #9-#16, 154, 192, 401 #46-#51, 464 #50-#52 <i>Teaching Tip</i> 24 <b>Teacher Wraparound Edition:</b> IE 13, 18; PS 93
8.M.3.2.3	Simplify algebraic expressions. (340.02.c)	<b>Student Edition:</b> 103-107, 114 #52-#57, 119 #56-#58, 136 #50-#52, 139, 141, 142 #8, 497 #44, #45, 727, 728 <b>Teacher Wraparound Edition:</b> DI 104; IE 104
<b>Goal 3.3: Solve algebraic equations and inequalities.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.3.3.1	Solve one- and two-step equations and inequalities. (340.03.a)	<b>Student Edition:</b> 28-32, 38 #50-#52, 110-114, 115-119, 120-124, 124 #54-#59, 127 #3, 129 #20-#23, 130 #30-#32, 136 #47-#49, 139, 327, 355-359, 451 <i>Algebra Activity</i> 108-109 <b>Teacher Wraparound Edition:</b> A 114; DI 116; IE 29, 111, 116, 121-122, 356
8.M.3.3.2	Match graphical representations with simple linear equations. (340.03.b)	<b>Student Edition:</b> 375-379, 381-385, 425 <b>Teacher Wraparound Edition:</b> IE 376
<b>Goal 3.4: Understand the concept of functions.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.3.4.1	Extend patterns and identify a rule (function) that generates the pattern using rational numbers. (343.01.a)	<b>Student Edition:</b> 7, 9, 16, 47-48, 74 #57, 167 #53, 249-252, 323 #12 <i>Algebra Activity</i> 253 <i>Spreadsheet Investigation</i> 137 <b>Teacher Wraparound Edition:</b> DI 79; IE 250

STANDARDS		PAGE REFERENCES
8.M.3.4.2	Use relationships to explain how a change in one quantity may result in a change in another, and identify the relationship as a positive, negative, or neither. (343.01.b)	<b>Student Edition:</b> 369-373, 379 #51, 393-397, 424, 426, 429 #12, 431 #18 <i>Algebra Activity</i> 368, 392 <i>Graphing Calculator Investigation</i> 374 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> DI 371, 395; IE 370, 394
8.M.3.4.3	Use appropriate vocabulary and notations. (343.01.c)	<b>Student Edition:</b> 249-250 <i>Algebra Activity</i> 253, 368 <i>Reading Mathematics</i> 380 <i>Vocabulary</i> 366 <b>Teacher Wraparound Edition:</b> IE 370; T 380
<b>Goal 3.5: Represent equations, inequalities and functions in a variety of formats.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.3.5.1	Represent a set of data in a table, as a graph, and as a mathematical relationship. (343.02.a)	<b>Student Edition:</b> 35 #4, 42 #3, 249, 261 #23, 343 #41, #42, 350, 369, 371 #10, #11, 372 #24-#27, #28, #29, 391 #26, #27, 418 #7 <i>Algebra Activity</i> 275 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> DI 373, 385; IE 399; PS 429
<b>Goal 3.6: Apply functions to a variety of problems.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.3.6.1	Use patterns and linear functions to represent and solve problems. (343.03.a)	<b>Student Edition:</b> 687-691, 696 #42, 700, 701, 757 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> A 691; DI 688; IE 689

STANDARDS	PAGE REFERENCES
<b>Standard 5: Data Analysis, Probability, and Statistics</b>	
Students in Grade 8 analyze and interpret tables, charts and graphs, including frequency tables, scatter plots, line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. Students collect, organize, and display data with appropriate notation in tables, charts, and graphs, including scatter plots, line graphs, line plots, bar graphs, histograms, and stem-and-leaf plots. Students choose and calculate the appropriate measure of central tendency – mean, median, and mode. Students recognize equally likely outcomes and make predictions based on experimental and theoretical probabilities.	
<b>Goal 5.1: Understand data analysis.</b>	
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>	
8.M.5.1.1 Analyze and interpret tables, charts, and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. (342.01.a)	<b>Student Edition:</b> 35-37, 40-44, 53 #18, 95 #11, 179 #63, 203 #46, #47, 431 #21, 617-621, 622-628, 633 #15, 658, 659, 722-723 <i>Algebra Activity</i> 39, 237 <i>Graphing Calculator Investigation</i> 44-45 <i>WebQuest</i> 325, 603 <b>Teacher Wraparound Edition:</b> DI 611; IE 35, 41, 607, 608, 618; PS 663
8.M.5.1.2 Explain and justify conclusions drawn from tables, charts, and graphs. (342.01.b)	<b>Student Edition:</b> 37 #28-#30, 179 #63, 203 #46, #47, 213 #46, #47, 431 #21, 610 #18-#21, 722-723 <i>Algebra Activity</i> 39, 180, 237, 275, 309, 386 <i>WebQuest</i> 3, 603
8.M.5.1.3 Use appropriate vocabulary and notations. (342.01.c)	<b>Student Edition:</b> 34, 40, 606, 612, 617, 623 <i>Algebra Activity</i> 309 <i>Reading Mathematics</i> 634
<b>Goal 5.2: Collect, organize, and display data.</b>	
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>	
8.M.5.2.1 Collect, organize, and display data with appropriate notation in tables, charts, and graphs, including scatter plots, broken line graphs, line plots, bar graphs, histograms, and stem-and-leaf plots. (342.02.a)	<b>Student Edition:</b> 107 #64, 412 #14-#17, 418 #7, 606-611, 665 #20, 722-723 <i>Algebra Activity</i> 39, 237, 275 <i>Graphing Calculator Investigation</i> 44-45, 622, 629 <i>WebQuest</i> 3, 325, 603 <b>Teacher Wraparound Edition:</b> DI 619; IE 618; PS 663

STANDARDS		PAGE REFERENCES
<b>Goal 5.3: Apply simple statistical measurements.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.5.3.1	Choose and calculate the appropriate measure of central tendency – mean, median, and mode. (342.03.a)	<b>Student Edition:</b> 238-242, 261 #23, 605, 607 #2, 608 #6, 613 #2, 614 #7, 615 #19, 616, 735 <i>Algebra Activity</i> 237 <i>Graphing Calculator Investigation</i> 243 <i>WebQuest</i> 145, 242 <b>Teacher Wraparound Edition:</b> DI 613; IE 81, 239, 240, 607
8.M.5.3.2	Explain the significance of distribution of data, including range, frequency, gaps, and clusters. (342.03.b)	<b>Student Edition:</b> 35-37, 44, 136 #53, 612-616, 627 <i>Graphing Calculator Investigation</i> 629 <i>Practice Quiz</i> 628 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> IE 613, 614
<b>Goal 5.4: Understand basic concepts of probability.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.5.4.1	Model situations of probability using simulations. (342.04.a)	<b>Student Edition:</b> <i>Graphing Calculator Investigation</i> 315
8.M.5.4.2	Recognize equally likely outcomes. (342.01.c)	<b>Student Edition:</b> 310-314, 320, 323 #17, 637 #4-#8, 638 #10-#19, 661, 663 <i>Algebra Activity</i> 640 <i>Practice Quiz</i> 645 <b>Teacher Wraparound Edition:</b> IE 636, 642
8.M.5.4.3	Explain that probability ranges from 0% to 100% and identify a situation as having high or low probability.	<b>Student Edition:</b> 310, 311, 312 #1, #3 <b>Teacher Wraparound Edition:</b> DI 311; IE 311

STANDARDS		PAGE REFERENCES
8.M.5.4.4	Use the language of probability. (342.04.b)	<b>Student Edition:</b> 310, 311, 636 <i>Algebra Activity</i> 309 <i>Graphing Calculator Investigation</i> 315 <i>Vocabulary</i> 316
<b>Goal 5.5: Make predictions or decisions based on data.</b>		
<b>Objective(s): By the end of Grade 8, the student will be able to:</b>		
8.M.5.5.1	Make predictions based on experimental and theoretical probabilities. (342.05.a)	<b>Student Edition:</b> 310-314, 646-649 <i>Algebra Activity</i> 656-657 <i>Graphing Calculator Investigation</i> 315
8.M.5.5.2	Conduct statistical experiments and interpret results using tables, charts, or graphs. (342.05.c)	<b>Student Edition:</b> 623-627, 665 #20 <i>Graphing Calculator Investigation</i> 629 <i>WebQuest</i> 3, 325, 603 <b>Teacher Wraparound Edition:</b> DI 632; TS 3, 325, 603
8.M.5.5.3	Use appropriate vocabulary and notations. (342.05.b)	<b>Student Edition:</b> 310, 311, 636, 646 <i>Study Tip</i> 310

STANDARDS		PAGE REFERENCES
<b>GRADE 9</b>		
<b>Standard 1: Number and Operation</b>		
Students in Grade 9 deepen their understanding of real numbers by applying properties of rational numbers and exponents and by identifying exact and approximate roots without simplification. Students use positive and negative numbers, absolute value, fractions, decimals, percentages, and scientific notation. Students use the proper order of operations and perform operations with rational numbers. Students apply number sense to everyday situations and judge reasonableness of answers.		
<b>Goal 1.1: Understand and use numbers.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.1.1.1	Apply properties of rational numbers. (347.01.b)	<b>Student Edition:</b> 23-27, 49, 52 #5, 61 #81-#83, 77 #5, #13, #14, 83 #26-#31, 98-102, 104 #1, 105 #3, 107 #57, 111 #2, 114 #58-#60, 132 #3, 209 #66-#69, 215, 216, 379, 413 #37-#42 <i>Algebra Activity</i> 62-63 <i>Practice Quiz</i> 32, 74 <b>Teacher Wraparound Edition:</b> A 27; IE 24, 99
9.M.1.1.2	Use positive and negative numbers, absolute value, fractions, decimals, percentages, and scientific notation, including application in real world situations. (347.01.a)	<b>Student Edition:</b> 56-61, 66 #5, 68 #46, #47, 73 #54, 75, 83 #34-#36, 85, 170 #3, 173 #47-#49, 186-190, 197 #14, 208 #30-#33, 212 #6, 223 #46, 266 #14, #15, 276-280, 289 #3, 297 #49, 299-301 <i>Spreadsheet Investigation</i> 137, 303 <i>WebQuest</i> 145, 325
9.M.1.1.3	Apply properties of exponents. (347.01.c)	<b>Student Edition:</b> 153-157, 175-179, 181-185
9.M.1.1.4	Identify exact and approximate roots without simplification.	<b>Student Edition:</b> 436-440, 483, 745 <i>Practice Quiz</i> 451 <b>Teacher Wraparound Edition:</b> DI 437; IE 437
9.M.1.1.5	Solve problems using number theory concepts (factors, multiples, primes). (347.01.d)	<b>Student Edition:</b> 148-152, 159-163, 164-168, 226-230, 236, 730, 731, 735 <b>Teacher Wraparound Edition:</b> A 163; DI 150; IE 165, 227; T 160

STANDARDS		PAGE REFERENCES
9.M.1.1.6	Use appropriate vocabulary.	<b>Student Edition:</b> 23-24, 56, 58, 98, 148, 164, 226, 436 <i>Reading Math</i> 437 <i>Reading Mathematics</i> 69 <i>Study Tip</i> 176 <i>Vocabulary</i> 56, 186
<b>Goal 1.2: Perform computations accurately.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.1.2.1	Use the order of operations and perform operations with rational numbers. (347.02.a)	<b>Student Edition:</b> 12-16, 18 #2, 21 #55-#57, 32 #65, #66, 48, 51 #3-#5, 53 #14, 147 #9-#16, 154, 192, 401 #46-#51, 464 #50-#52 <i>Teaching Tip</i> 24 <b>Teacher Wraparound Edition:</b> IE 13, 18; PS 93
<b>Goal 1.3: Estimate and judge reasonableness of results.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.1.3.1	Apply number sense to everyday situations and judge reasonableness of results. (347.03.a)	<b>Student Edition:</b> 8, 43 #19, 187 #3, 220, 221, 234 #6, 294-297 <i>Algebra Activity</i> 275 <i>WebQuest</i> 145 <b>Teacher Wraparound Edition:</b> DI 294; IE 294
9.M.1.3.2	Identify that error accumulates in a computation when there is rounding. (349.05.b)	<b>Student Edition:</b> 9 #8, 291, 463 #34, #35, 480 #34, 487 #16, 590-594 <i>Study Tip</i> 478

STANDARDS		PAGE REFERENCES
<b>Standard 2: Concepts and Principles of Measurement</b>		
Students in Grade 9 formulate and use proportions, ratios, and scaling. Students apply concepts of rates and direct and indirect measurements. Students evaluate given measurement formulas for two- and three-dimensional objects.		
<b>Goal 2.1: Understand and use U.S. customary and metric measurements.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.2.1.1	Given the formulas, find the circumference, perimeter, or area of triangles, circles, and quadrilaterals, and the volume and surface area of rectangular prisms and cylinders. (349.01.a)	<b>Student Edition:</b> 132-136, 143 #19, 247 #49, 349 #56, 520-525, 533-538, 547, 548, 563-567, 573-577, 749 <i>Spreadsheet Investigation 137</i> <b>Teacher Wraparound Edition:</b> A 136; IE 132, 564, 574
9.M.2.1.2	Solve problems involving circumference, perimeter, or area of triangles, circles, and rectangles.	<b>Student Edition:</b> 132-136, 143 #19, 247 #49, 349 #56, 520-525, 533-538, 547, 548, 749 <i>Spreadsheet Investigation 137</i> <b>Teacher Wraparound Edition:</b> A 136; IE 132
<b>Goal 2.2: Apply the concepts of rates, ratios, and proportions.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.2.2.1	Use rates, ratios, proportions, and map scales in problem-solving situations. (349.03.a)	<b>Student Edition:</b> 123 #47, 135 #42, 264-268, 270-274, 276-280, 292 #32, 316, 317, 472, 473 <i>Algebra Activity 269</i> <i>Reading Mathematics 275</i> <b>Teacher Wraparound Edition:</b> A 280; IE 277
9.M.2.2.2	Apply concepts of rates and direct and indirect measurements.	<b>Student Edition:</b> 71 #3, 177 #12, 184 #44, 207 #11, 228 #15, 264-268, 300, 321, 471-475 <i>Spreadsheet Investigation 303</i>
9.M.2.2.3	Construct equivalent units, comparable units, and conversions. (349.02.a)	<b>Student Edition:</b> 118 #48, 172 #29, #42, #44, 184 #44, 189 #44-#46, 207 #11, 213 #34-#37, 214 #49-#52, 263, 266, 272 #4, 397 #19, 718-719, 720-721, 734

STANDARDS		PAGE REFERENCES
<b>Goal 2.3: Apply dimensional analysis.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.2.3.1	Use customary and metric units and their relationship to one another and to real world applications involving length, area, capacity, weight, time, and temperature. (349.04.a)	<b>Student Edition:</b> 16 #61, 19 #12, 60 #67-#70, 83 #34-#36, 131-136, 157 #56, 187 #3, 223 #47, 267 #47, #48, 272 #4, 291 #24, 337 #37, 417 #24-#26, 520-525, 539-543, 551 #19, 563, 567 #28  <i>Algebra Activity</i> 237 <i>Spreadsheet Investigation</i> 137 <i>WebQuest</i> 145
<b>Goal 2.4: Apply appropriate techniques and tools to determine measurements.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.2.4.1	Determine and use appropriate units. (349.01.a)	<b>Student Edition:</b> 71 #3, 177 #12, 182 #3, 183 #13, 184 #44, 189 #40, 207 #11, 228 #15, 262 #43, 590-594, 718-719, 720-721, 734  <b>Teacher Wraparound Edition:</b> DI 534
9.M.2.4.2	Approximate error in measurement situations.	<b>Student Edition:</b> 536 #3, 565 #2, 590-594
<b>Standard 3: Concepts and Language of Algebra and Functions</b>		
Students in Grade 9 use appropriate procedures for manipulating and simplifying algebraic expressions involving variables, integers, rational numbers, and for solving multi-step, first-degree equations and inequalities. Students understand the concept and applications of functions and mathematical models. Given graphs, charts, ordered pairs, mappings, or equations, students determine whether a relation is a function. Students evaluate functions written in functional notation and, given a function, students identify domain and range.		
<b>Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.3.1.1	Represent mathematical relationships using variables, expressions, linear equations and inequalities. (350.01.a)	<b>Student Edition:</b> 17-21, 28-32, 48, 49, 113 #43, #44, 116 #2, 129 #20-#24, 143 #21, 330-333, 340-344, 345-349, 350-354, 404-408, 427  <i>Reading Mathematics</i> 125  <b>Teacher Wraparound Edition:</b> DI 405; IE 341, 346; PS 141

STANDARDS		PAGE REFERENCES
<b>Goal 3.2: Evaluate algebraic expressions.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.3.2.1	Use appropriate procedures for manipulating and simplifying algebraic expressions involving variables, integers, and rational numbers. (350.02.a)	<b>Student Edition:</b> 103-107, 114 #52-#57, 119 #56-#58, 136 #50-#52, 139, 141, 142 #8, 497 #44, #45, 727, 728 <b>Teacher Wraparound Edition:</b> DI 104; IE 104
<b>Goal 3.3: Solve algebraic equations and inequalities.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.3.3.1	Use appropriate procedures to solve multi-step, first-degree equations and inequalities; such as $3(2x - 5) = 5x + 7$ or $3(2x - 5) > 5x + 7$ . (350.03.a)	<b>Student Edition:</b> 28-32, 38 #50-#52, 110-114, 115-119, 120-124, 124 #54-#59, 127 #3, 129 #20-#23, 130 #30-#32, 136 #47-#49, 139, 327, 355-359, 451 <i>Algebra Activity</i> 108-109 <b>Teacher Wraparound Edition:</b> A 114; DI 116; IE 29, 111, 116, 121-122, 356
9.M.3.3.2	Differentiate between linear and non-linear equations and graphs.	<b>Student Edition:</b> 687-691, 700 <b>Teacher Wraparound Edition:</b> A 379; DI 688; IE 688, 689
<b>Goal 3.4: Solve simple linear systems of equations.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.3.4.1	Use appropriate procedures to solve linear systems of equations involving two variables; such as $x + y = 7$ and $2x + 3y = 21$ . (350.04.a)	<b>Student Edition:</b> 414-418, 428, 765 #14 <b>Teacher Wraparound Edition:</b> IE 415
<b>Goal 3.5: Understand the concept of functions.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.3.5.1	Given graphs, charts, ordered pairs, mappings, or equations, determine whether a relation is a function.	<b>Student Edition:</b> 369-373 <i>Algebra Activity</i> 368 <i>Graphing Calculator Investigation</i> 374 <i>Reading Mathematics</i> 380 <b>Teacher Wraparound Edition:</b> A 373

STANDARDS		PAGE REFERENCES
9.M.3.5.2	Evaluate functions written in functional notation.	<b>Student Edition:</b> <i>Reading Mathematics</i> 380
9.M.3.5.3	Given a function, identify domain and range.	<b>Student Edition:</b> 369, 424 <i>Reading Mathematics</i> 380 <b>Teacher Wraparound Edition:</b> DI 371
<b>Goal 3.6: Apply functions to a variety of problems.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.3.6.1	Model and solve real-world phenomena using multi-step, first degree, single variable equations and inequalities, linear equations, and two-variable linear systems of equations. (353.01.a)	<b>Student Edition:</b> 28-32, 38 #50-#52, 110-114, 115-119, 120-124, 124 #54-#59, 127 #3, 129 #20-#23, 130 #30-#32, 136 #47-#49, 139, 327, 355-359, 414-418, 428, 451, 765 #14 <i>Algebra Activity</i> 108-109 <b>Teacher Wraparound Edition:</b> A 114; DI 116; IE 29, 111, 116, 121-122, 356, 415
9.M.3.6.2	Use graphs and sequences to represent and solve problems. (347.02.b)	<b>Student Edition:</b> 370, 372, 375-379, 381-385 <b>Teacher Wraparound Edition:</b> DI 371, 385; IE 370

STANDARDS	PAGE REFERENCES
<b>Standard 5: Data Analysis, Probability, and Statistics</b>	
Students in Grade 9 interpret and use basic statistical concepts including mean, median, mode, range, and distribution of data, including outliers. Students make predictions and draw conclusions based on statistical measures and students make predictions based on randomness, chance, equally likely events, and probability. Students find probabilities based on dependent, independent, and compound events and students make predictions based on randomness, chance, equally likely events, and probability.	
<b>Goal 5.1: Represent data with a variety of formats.</b>	
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>	
9.M.5.1.1 Analyze and interpret tables, charts, and graphs, including scatter plots, broken line graphs, and box-and-whisker plots. (352.01.a)	<b>Student Edition:</b> 35-37, 40-44, 53 #18, 95 #11, 179 #63, 203 #46, #47, 431 #21, 617-621, 622-628, 633 #15, 658, 659, 722-723 <i>Algebra Activity</i> 39, 237 <i>Graphing Calculator Investigation</i> 44-45, 622 <i>WebQuest</i> 325, 603 <b>Teacher Wraparound Edition:</b> DI 611, 619; IE 35, 41, 607, 608, 618; PS 663; TNT 620
<b>Goal 5.2: Collect, organize, and display data.</b>	
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>	
9.M.5.2.1 Collect, organize, and display data in tables, charts, and graphs. (352.02.a)	<b>Student Edition:</b> 107 #64, 412 #14-#17, 418 #7, 606-611, 665 #20, 722-723 <i>Algebra Activity</i> 39, 237, 275 <i>Graphing Calculator Investigation</i> 44-45, 622, 629 <i>WebQuest</i> 3, 325, 603 <b>Teacher Wraparound Edition:</b> DI 619; IE 618; PS 663

STANDARDS		PAGE REFERENCES
<b>Goal 5.3: Apply simple statistical measurements.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.5.3.1	Interpret and use basic statistical concepts, including mean, median, mode, range, and distribution of data, including outliers. (352.03.a)	<b>Student Edition:</b> 35-37, 44, 136 #53, 238-242, 261 #23, 605, 607 #2, 608 #6, 613 #2, 614 #7, 615 #19, 616, 627, 735 <i>Algebra Activity</i> 237 <i>Graphing Calculator Investigation</i> 243, 629 <i>Practice Quiz</i> 628 <i>WebQuest</i> 145, 242, 325 <b>Teacher Wraparound Edition:</b> DI 613; IE 81, 239, 240, 607, 613, 614
9.M.5.3.2	Make predictions and draw conclusions based on statistical measures. (352.05.a)	<b>Student Edition:</b> 35-37, 44, 136 #53, 612-616, 627 <i>Graphing Calculator Investigation</i> 629 <i>Practice Quiz</i> 628 <i>WebQuest</i> 325 <b>Teacher Wraparound Edition:</b> IE 613, 614
<b>Goal 5.4: Understand basic concepts of probability.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.5.4.1	Find probabilities based on dependent, independent, and compound events.	<b>Student Edition:</b> 650-655, 662 <b>Teacher Wraparound Edition:</b> A 655; IE 651
9.M.5.4.2	Contrast experimental and theoretical probability. (352.04.a)	<b>Student Edition:</b> 311 <i>Graphing Calculator Investigation</i> 315, 656-657 <b>Teacher Wraparound Edition:</b> A 657

STANDARDS		PAGE REFERENCES
<b>Goal 5.5: Make predictions or decisions based on data.</b>		
<b>Objective(s): By the end of Grade 9, the student will be able to:</b>		
9.M.5.5.1	Make predictions based on randomness, chance, equally likely events, and probability. (352.04.c)	<b>Student Edition:</b> 310-314, 320, 321 #28, 333 #42, 338 #45, 649 #28-#30, 654 #29, #30 <i>Algebra Activity</i> 309, 656-657
9.M.5.5.2	Use appropriate tools/technology to conduct simulations and employ graphical models to make predictions or decisions based on data. (352.05.a)	<b>Student Edition:</b> <i>Algebra Activity</i> 656-657 <i>Graphing Calculator Investigation</i> 315, 656-657 <i>WebQuest</i> 3, 325, 603
9.M.5.5.3	Design, conduct, and interpret results of statistical experiments. (352.05.b)	<b>Student Edition:</b> 623-627, 665 #20 <i>Graphing Calculator Investigation</i> 629 <i>WebQuest</i> 3, 325, 603 <b>Teacher Wraparound Edition:</b> DI 632; TS 3, 325, 603