



**NEVADA**  
**Mathematics Content Standards**  
**Grade Twelve**  
**MathMatters 1, 2, and 3 © 2001**

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<b>Numbers, Number Sense, and Computation</b>			
<b>Content Standard 1.0: To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will accurately calculate, use estimation techniques, number relationships, operation rules, and algorithms; they will determine the reasonableness of answers and the accuracy of solutions.</b>			
By the end of <b>Grade 12</b> , students know and are able to do everything required in the previous grades and:			
1.12.1 I/S <b>Calculate</b> and estimate sums, differences, products, quotients, <b>powers</b> , and <b>roots</b> using mental math, <b>formulas</b> , and <b>algorithms</b> . S 23.12.3; C 4.12.1	SE: 2-3, 104-107, 136-139, 142-145, 429, 462, 561-567 <i>Critical Thinking</i> 345	SE: 66-69, 72-75, 82-85, 380-383, 398 #13-#40, 603-609 <i>Are You Ready?</i> 48-49 ATE: CE 397 <i>Extra Practice Worksheet:</i> 69, 75	SE: 20-23, 26-29, 34-37, 38-41, 426-429 <i>Are You Ready?</i> 423 #19-#30 <i>Extra Practice</i> 1-4 685, 1-5 686, 1-6 686 <i>MathWorks</i> 33
1.12.2 W/L Apply the laws of <b>exponents</b> to perform <b>operations</b> on expressions with <b>integral exponents</b> and expressions in scientific notation. S 1.12.2	SE: 100, 132-135, 136-139, 140-141, 147 ATE: CE 137 EL 133 LS 141	SE: 57 Example 3, 82-85, 86-89, 381, 386 Example 1 <i>Alternative Assessment</i> 97 <i>Are You Ready?</i> 372 #1-#12, 373 #41, #43-#44 <i>Review and Practice Your Skills</i> 90-91 #1-#54, #61-#66, #98-#112 ATE: TT 82-83	SE: 34-37, 38-41 <i>Are You Ready?</i> 464 <i>Extra Practice</i> 1-7 686, 1-8 687 ATE: C 35, 39, 465 <i>Reteaching:</i> 14, 16

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
1.12.3 Apply the properties and theories of the real number system to everyday situations. S 1.12.2; H 3.12.4	I/S SE: 118-121, 141 #84-#86, 146 ATE: EL 119 LS 118	SE: 52 #1-#4, 54 #23, 55 #38-#44, 63 Example 3, 77 Example 3, 111 #46, 179 Example 3, 270 #19-#23 <i>Alternative Assessment</i> 97 <i>MathWorks</i> 113	SE: 10-13, 16-19 <i>Addition Properties</i> 21 <i>MathWorks</i> 15 <i>Multiplication Properties</i> 27 <i>Problem Solving Skills</i> 30-31 ATE: C 11, 17, 21, 27
1.12.5 Perform simple operations on <b>matrices</b> .	W/L The following examples could use matrices in the project; then different operations could be applied. SE: 451 #10 <i>Cooperative Learning</i> 45 <i>Critical Thinking</i> 345 <i>Data Activity</i> 305	SE: 38-41, 354-357 <i>Assessment</i> 44 #15-#18 <i>Review</i> 43 #18-#20 <i>Review and Practice Your Skills</i> 360 #1-#8 ATE: CE 39 TS 38 TT 39 <i>Extra Practice Worksheet:</i> 41 <i>Reteaching Worksheet:</i> 40	SE: 358-361, 362-365, 368-371, 372-373 <i>Extra Practice</i> 8-5 710, 8-6 710, 8-7 711 ATE: C 359 T 361, 363
<b>Patterns, Functions, and Algebra</b>			
<b>Content Standard 2.0: To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations (words, numbers, tables, and graphs) of patterns, functions, and algebraic relations as modeled in practical situations.</b>			
2.12.2 Represent and solve problems using <b>discrete</b> structures including graphs and matrices, with and without technology. Ec 3.12.2; H 4.12.1; H 5.12.1	E/L SE: 129 #18, 321, 449 #34-#37, 450-453 ATE: TT 453	SE: 12 #6-#9, 16-19, 29, 38-41, 243, 258-261, 264 Example 1 <i>Are You Ready?</i> 2-3 #1-#16 <i>Review</i> 42-43 #8-#20 ATE: EL 3	SE: 62-65, 86-89, 360 #18-#20, 282-285, 361 #31, 365 #37, #38, 368-371 <i>Problem Solving Skills</i> 274-275, 372-373, 446-447

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>2.12.3 E/S Create and use different forms of a variety of equations, proportions, and/or formulas (e.g., <math>I=PRT</math> or <math>R=I/PT</math>), solving for the needed variable as necessary in given situations. H 3.12.4; H 4.12.1; S 1.12.2; S 1.12.4; S 20.12.1; S 23.12.2</p>	<p>SE: 214 #12-#14, 215 #45-#46, 221 #49-#51, 224-225, 232-235, 260-263, 270-273, 280-283, 536 <i>MathWorks</i> 131 ATE: EL 125, 209, 264</p>	<p>SE: 104-107, 111 #47, 117 Example 3, 122-125 <i>Are You Ready?</i> 101 #22-#29 <i>MathWorks</i> 113 ATE: CE 105, 123 EL 107 TT 105</p>	<p>This objective can be met by having students first write equations/formulas for the following problems: SE: 65 #19, 75 #33, 79 #20, 227 #16, 233 #18, 247 #38-#42, 298-299 #18-#21, #28-#31 ATE: E 232</p>
<p>2.12.4 I/S Add, subtract, multiply, and factor (<math>1^{\text{st}}</math> and <math>2^{\text{nd}}</math> degree) <b>polynomials</b>, describing each step in the process and the connection between the algebraic process and the arithmetic process; use simple quadratic equations with integer roots to solve practical and mathematical problems. H 3.12.4; H 4.12.1; S 23.12.2</p>	<p>SE: 398-401, 403, 408-411, 418-421, 429, 556 ATE: EL 400 LS 399 TT 408</p>	<p>SE: 268-271, 376-379, 390-393, 404-407, 408-411 <i>Review and Practice Your Skills</i> 272 #24-#27 ATE: CE 269, 391, 409 TT 378</p>	<p>SE: 468-471, 472-475, 478-481, 482-485, 488-491, 492-495, 498-501, 506-509, 530-533, 534-537</p>
<p>2.12.5 E/S Model practical problems from everyday situations with a variety of models that includes matrices, translating among tabular, symbolic and graphical representations of functions, with and without technology. Ec 3.12.2; Ec3.12.3; Ec 3.12.4; Ec 6.12.6; G 1.12.3; H 3.12.4; H 4.12.1; S 1.12.2</p>	<p>SE: 314-317 <i>Chapter Investigation</i> 305 <i>Critical Thinking</i> 345 ATE: EL 317</p>	<p>SE: 10 #1-#3, 11, 17, 21 Example 2, 40 Example 4, 41 #12-#20, 251 #36-#40, 257 #35-#37 <i>MathWorks</i> 33, 253</p>	<p>SE: 56-59, 62-65, 358-361, 362-365, 520-523, 524-527, 530-533 <i>Problem Solving Skills</i> 372-373 <i>Review and Practice Your Skills</i> 61, 528-529</p>

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
2.12.6 W/L Determine the <b>domain</b> and <b>range</b> of linear relations given a graph or a set of <b>ordered pairs</b> ; explain their importance in problem-solving situations. H 5.12.1	SE: 308-311, 314-317 <i>Technology 345</i> ATE: TT 314, 342	SE: 244-245 Example 2, 264-267 <i>Assessment 288 #23-#25</i> <i>Review 287 #16-#17</i> <i>Review and Practice Your Skills 272 #14-#19</i> ATE: CE 265 TT 265 <i>Extra Practice Worksheet: 267</i>	SE: 56-59 <i>Extra Practice 2-2 687 #25-#27</i> <i>Review 94 #8, #9</i> <i>Review and Practice Your Skills 60 #34, #35, 61 #36, #37</i> ATE: C 57 Example 1, 61, 63 Example 2 <i>Extra Practice: 18</i> <i>Reteaching: 20</i>
2.12.7 W/L Solve systems of two linear equations, both algebraically and graphically; use graphing calculators as a primary tool in solving these problems and to verify solutions found by other methods.	The following examples exemplify solving single linear equations. SE: 314-317, 318-321 <i>Technology 345</i>	SE: 338-341, 344-347, 348-351 <i>Review and Practice Your Skills 343 #37-#39</i> ATE: CE 339, 345 EL 346 <i>Enrichment Worksheet: 341</i> <i>Extra Practice Worksheet: 347</i> <i>Reteaching Worksheet: 340, 346</i>	SE: 258-261, 264-267, 268-271 <i>Extra Practice 6-4 703, 6-5 704, 6-6 704</i> <i>Review and Practice Your Skills Lesson 262, 272-273, 280-281</i> <i>Extra Practice: 80</i>
<b>Measurement</b>			
<b>Content Standard 3.0: To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will use appropriate tools and techniques of measurement to determine, estimate, record, and verify direct and indirect measurements.</b>			
3.12.1 I/L Convert between customary and metric systems; convert among monetary systems.	SE: 56-59, 71 #7, 536, 539 ATE: CE 57 EL 57 LS 58	SE: 74 #54	SE: 202-205 <i>Extra Practice 5-1 699</i> <i>Review 234 #6-#8</i> <i>Review and Practice Your Skills 210-211 #1-#15, #29-#41</i> ATE: C 203 T 204 <i>Extra Practice: 62</i> <i>Reteaching: 70</i>

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
3.12.2 I/S Select and use measurement tools, techniques, and formulas to calculate and compare rates, cost, distances, interest, temperatures, and weight/mass. S 2.12.1	SE: 52, 62-65, 91, 169 #33, 225 #48-#51, 233 ex 2, 284-287 <i>Problem Solving Skill 72-73, 170-171</i>	SE: 206 #1-#5, 426-429, 436-439, 452-459, 462-463, 478-481 <i>Are You Ready?</i> 418-419 <i>MathWorks 483</i> ATE: LW 463 TT 422	SE: 106-107, 108-111, 202-205, 233 #23 <i>Are You Ready?</i> 101 #10-#19 <i>Problem Solving Skills 326-327</i>
3.12.3 I/S Distinguish and differentiate among the structures, language and uses of systems of measures (e.g., linear, square units, cubic units); justify and communicate the differences between accuracy, precision, error, and tolerance in measurement; describe how each of these can affect solutions found in problem situations. S 23.12.8	SE: 52-55, 90-93, 94, 96, 132, 139 #60-#62, 142-145 ATE: TT 89, 153	SE: 191 #1, 196-199, 247 #35, 274, 422-425, 447 Example 2, 462-463 <i>MathWorks 431</i> ATE: CE 463 TT 462	SE: 202, 227 #19-#21 <i>Build Understanding 206, 224</i> ATE: E 205 T 204, 217, 231 <i>Extra Practice: 62</i>
3.12.4 I/L Use and interpret consumer data (e.g., <b>amortization tables</b> , tax tables, and compound interest charts) to make informed financial decisions related to practical applications such as budget. E 4.12.3; Ec 2.12.4; Ec 2.12.5; Ec 2.12.8; Ec 2.12.12	SE: 274-279, 280-283, 295 #11-#13 <i>MathWorks 237, 269</i> ATE: EL 220, 269	SE: 125 #50, 151 Example 1, 219 #62, 257 #34, 346 #7, 391 Example 4, 399 #55-#56, 406 #7 ATE: TT 462	SE: 86-89, 259-260 Example 4, 261 #15, 467 <i>Problem Solving Skills 446-447</i> This objective also can be met by using the Economics Data File on pages 640-641.

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
3.12.5 Use relationships (e.g., proportions) and formulas (indirect measurement) to determine the measurement of unknown dimensions, angles, areas, and volumes to solve problems. S 2.12.1; S 23.12.4	I/S SE: 66-69, 73 #6-#18, 80-83, 84-87, 90-93, 95, 97, 184-187, 188-191 <i>Chapter Investigation 51</i>	SE: 432-435, 452-455, 456-459, 462-463, 478-481 <i>Are You Ready?</i> 418-419 ATE: CE 479 LW 463 TT 419, 478	SE: 70 #18, 75 #33, 114-117, 227 #16, 233 #18, 247 #38-#42, 298-299 #18-#21, #28-#31 <i>Problem Solving Skills</i> 326-327 ATE: E 327 <i>Reteaching</i> : 114
<b>Spatial Relationships and Geometry</b>			
<b>Content Standard 4.0: To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will identify, represent, explain, verify, and apply spatial relationships and geometric properties.</b>			
4.12.1 Identify and use the properties of polygons (including interior and exterior angles) and elements of circles (e.g., angles, arcs, <b>chords</b> , <b>secants</b> and <b>tangents</b> ) to solve practical problems. H 3.12.4	I/S SE: 80, 93 #29, 160-163, 383 #19, 352-355, 366-367, 380-382 <i>Connection 201</i>	SE: 152 Example 3, 224 Example 3, #21, 227 Example 3, 228-229 #22-#23, #29, #31-#32, 232-233 ATE: CE 151, 223, 233 EL 289	SE: 178-181, 182-185, 188-191, 440-443, 448-451 <i>Extra Practice 4-7</i> 697, 4-8 698, 4-9 698, 10-4 716, 10-6 716
4.12.5 Use coordinate geometry to graph linear equations, determine slopes of lines, identify parallel and <b>perpendicular lines</b> and find possible solutions to sets of equations; use algebraic techniques to solve problems determined by geometric relationships. H 5.12.1	I/S SE: 308-311, 318-321, 324-327, 334-337 <i>Chapter Investigation 387</i> <i>MathWorks</i> 333 ATE: EL 309, 326	SE: 248 Example 1, 250 #1-#3, #13-#20, 254 Example 1, 256 #7, 337 #39, 338-341 <i>Review and Practice Your Skills</i> 252 #26-#28 <i>Enrichment Worksheet</i> : 337, 341 <i>Reteaching Worksheet</i> : 256, 336	SE: 62-65, 244-247, 248-251 <i>Extra Practice 2-3</i> 688, 6-1 701-702, 6-2 702 ATE: E 245 <i>Reteaching</i> : 22, 84, 86

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>4.12.6 Use complementary and supplementary angles, congruent angles, vertical angles, angles formed when parallel lines are cut by a transversal, and angles in polygons to solve practical problems. H 3.12.4</p> <p style="text-align: right;">W/S</p>	<p>SE: 215 #44, 352-355, 360, 362-365 ATE: TT 360</p>	<p>SE: 198 #19, 199 #25-#29, 204 #30, 205 #35, #37-#39, 209 #31-#33, 218 #31, 224 #21 <i>MathWorks</i> 201, 221 ATE: EL 206</p>	<p>SE: 108-111, 114-117, 120-121, 178-181, 188-191 <i>MathWorks</i> 133 <i>Problem Solving Skills</i> 170-171 <i>Review and Practice Your Skills</i> 112-113 ATE: C 119 Example 3, Example 4 T 111</p>
<p>4.12.7 Apply the Pythagorean Theorem, its <b>converse</b>, properties of special right triangles, and right triangle trigonometry to solve practical problems. H 3.12.4</p> <p style="text-align: right;">I/S</p>	<p>SE: 334-337, 425 #25, #26 ATE: EL 67, 335</p>	<p>SE: 476 #18, 478-481, 485 Example 3, 486-487 #17-#21, #26-#29, 490 #27 <i>MathWorks</i> 483 ATE: CE 485 EL 480 <i>Extra Practice Worksheet:</i> 487 <i>Reteaching Worksheet:</i> 480</p>	<p>SE: 430-433, 436-439, 604-607, 608-611, 614-617, 618-621 <i>MathWorks</i> 435 <i>Review and Practice Your Skills</i> 434-435 #37-#63, 612-613 ATE: E 432</p>
<p>4.12.8 Use tools, technology, and models to sketch, draw, and construct geometric figures in order to solve problems and to demonstrate the properties of geometric figures.</p> <p style="text-align: right;">W/L</p>	<p>SE: 87 #48-#52, 160-163, 169 #28, 171 #11, 174-177, 178-181, 453 #47 <i>Chapter Investigation</i> 97, 155 <i>Connection</i> 201 <i>MathWorks</i> 183</p>	<p>SE: 197 Example 3, 206 #1, 222 #1, 226 #1-#5, 229 #27-#28, 232 <i>Alternative Assessment</i> 237, 327 <i>Technology Reference Guide</i> 589-591 ATE: TT 196</p>	<p>SE: 118-121, 220-223, 348-351, 352-355, 454-457 ATE: L 152 T 222 Geometry Software is used throughout the text. Some examples are: SE: 157 #8, #9, 320 #1-#3 <i>Technology Note</i> 106</p>

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>4.12.9 Construct, justify and defend mathematical conclusions using logical, sequential, <b>deductive reasoning</b> supported by established mathematical principles. E 10.12.4</p>	<p>E/S SE: 475 #18-#19, 488-491, 498-501, 502-505 <i>Chapter Investigation</i> 155, 299, 345 <i>Problem Solving Skill</i> 460-461 <i>MathWorks</i> 463 <i>Portfolio</i> 513</p>	<p>SE: 192 #1-#3, 195 #31, 199 #30-#32, 205 #40-#42, 209 #34, 215 #27, 219 #49, 225 #34-#35, 229 #30 ATE: EL 202</p>	<p>SE: 124-127, 128-131, 134-137 <i>Are You Ready?</i> 101 #20-#26 <i>Extended Practice Exercises</i> 111 <i>Extra Practice</i> 3-6 694, 3-7 694 <i>Problem Solving Skills</i> 138-139 <i>Review and Practice Your Skills</i> 132-133</p>
<b>Data Analysis</b>			
<b>Content Standard 5.0: To solve problems, communicate, reason, and make connections within and beyond the field of mathematics, students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability projections.</b>			
<p>5.12.1 Use calculators and computers to create and manipulate tables, graphs, and matrices to communicate statistical information; use the shape of graphs of normal distributions to compare and analyze information. G 3.12.4; G 4.12.1; G 7.12.3; H 2.12.2; H 2.12.3; S 22.12.2</p>	<p>I/L SE: 13 #51, 21 #16, 41 #28, 135 #73, 277 #41-#44, 321 #33-#37 <i>Technology</i> 45</p>	<p>SE: 11 Example 2, 16 Example 1, 21-22, 26, 29 Example 2, 37 #20, 99 <i>Alternative Assessment</i> 45</p>	<p>SE: 64, 84 Example 3, 89 Example 3, 364 #20-#23, 389 #7, 409 #12 <i>Extended Practice</i> 415 <i>Technology Note</i> 363, 531, 408</p>
<p>5.12.2 Design, conduct, analyze, and communicate the results of multi-stage probability experiments. H 5.12.1</p>	<p>I/L SE: 440-443, 446-449, 455 #29-#32 <i>Data Activity</i> 435 <i>MathWorks</i> 445 ATE: CE 441 CP 435 TS 440</p>	<p>SE: 150 #1-#3, 155 #1-#3, 161 #22, #28, 181 #29 <i>Alternative Assessment</i> 185 <i>Chapter Investigation</i> 149 <i>MathWorks</i> 177</p>	<p>SE: 384-387, 392-395, 396-399 <i>Extra Practice</i> 9-1 711, 9-2 712, 9-3 712 <i>Problem Solving Skills</i> 388-389 ATE: C 389 E 381 <i>Extra Practice</i>: 118</p>

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>5.12.3 W/L Distinguish between and apply <b>permutations</b> and combinations using a variety of methods, including The Fundamental Counting Principle. H 5.12.1</p>	<p>SE: 449 #34-#37, 450-453, 455 #35-#36 ATE: TT 451, 453</p>	<p>SE: 159 Example 2, 160 #3, #10, 164 #19, 172-175, 178-181 <i>Alternative Assessment</i> 185 ATE: EL 180 LW 174 <i>Enrichment Worksheet: 175</i> <i>Extra Practice Worksheet: 161</i></p>	<p>SE: 402-405 <i>Extra Practice 9-5 713</i> <i>Review and Practice Your Skills 410 #1-#24</i> ATE: C 403 E 405 T 404 <i>Reteaching: 140</i></p>
<p>5.12.4 E/S Select and use the measures of central tendency such as mean, median, mode and variability including range, distribution and possible outliers that are appropriate for given situations. G 7.12.4; S 20.12.4</p>	<p>SE: 10-13, 16, 19, 27 #25, 39 #4-#10, 42 #9-#12, 46 #15-#16, 65 #43-#44, 169 #38, 211 #66, 389 #17, 554 <i>Critical Thinking 45</i> ATE: EL 28 GS 38</p>	<p>SE: 10-13, 19 #29-#32, 29 Example 2 <i>Review and Practice Your Skills 14 #9-#14, 25 #21-#23</i> ATE: CE 11 EL 10, 11 <i>Enrichment Worksheet: 13</i> <i>Extra Practice Worksheet: 13</i> <i>Reteaching Worksheet: 12</i></p>	<p>SE: 82-85, 86-89, 412-415 <i>Are You Ready? 49 #25-#28, 380 #36-#41</i> <i>Extra Practice 2-7 690, 2-8 691</i> <i>Review and Practice Your Skills 90-91</i> <i>Reteaching: 30, 32</i></p>
<p>5.12.5 E/S Analyze the validity of statistical conclusions noting various sources of bias, misuse, and abuse of data caused by a wide variety of factors including choices of scale, probability versus odds, inappropriate uses of measures of central tendency, inaccurate curve fitting and inappropriate uses of controls or sample groups. S 19.12.1; S 21.12.2; S 21.12.3; S 23.12.6</p>	<p>SE: 6-9, 10-13, 59 #63-#66, 73 #34-#36, 135 #74-#76 <i>Chapter Investigation 345</i> <i>MathWorks 463</i> <i>Problem Solving Strategy 460-461</i></p>	<p>SE: 6, 34-37, 150, 155 #9 <i>Alternative Assessment 45</i> <i>Review 43 #17</i> ATE: CE 35 LW 36 <i>Enrichment Worksheet: 37</i> <i>Extra Practice Worksheet: 37</i> <i>Reteaching Worksheet: 36</i></p>	<p>SE: 95 #29 <i>Problem Solving Skills 92-93</i> ATE: E 93 <i>Reteaching: 34</i> Examples of appropriate methods for displaying data: SE: 85 #12, #16 <i>Cooperative Learning 97</i></p>

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
5.12.6 I/L Design, construct, analyze, and select an appropriate type of graph to represent data to communicate the results of statistical experiments (e.g., write a survey question and analyze and communicate the findings). S 22.12.2	SE: 6-9, 28-31, 373 #25, 492-495, 531 <i>Chapter Investigation 5</i> , 149, 345 <i>Cooperative Learning 45</i> <i>Critical Thinking 45</i>	SE: 16-19, 20-23, 29 Example 2, 31 #10-#14 <i>Alternative Assessment 45</i> <i>Review 42-43 #11, #15</i> <i>Review and Practice Your Skills 24-25 #1-#9, #20, #24, 32 #9</i>	SE: 86-89, 398 #6-#8, 406-409 <i>Extra Practice 2-8 691, 9-6 713</i> <i>Problem Solving Skills 446-447</i> <i>Review and Practice Your Skills 90 #11-#19</i> ATE: E 86, 409 T 410
<b>Problem Solving</b>			
<b>Process Standard 6.0: <i>Students will develop their ability to solve problems by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts in order to: formulate their own problems; find solutions to problems from everyday situations; develop and apply strategies to solve a wide variety of problems; and integrate mathematical reasoning, communication and connections.</i></b>			
6.1 E/S Select, modify, develop, and apply strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts. S 1.2.3; S 1.5.1; S 1.8.1; S 1.8.4; S 1.12.2; S 1.12.4; S 2.12.1; S 3.2.3; S 10.5.2; S 14.8.6; S 19.12.2; S 21.3.1	SE: 72-73, 128-129, 238-239, 263, 294-295, 306-307, 366-367, 460-461, 502-503 ATE: EL 10, 189 GS 20, 170, 294, 306	SE: 26, 92, 114, 118 #10, 154, 232, 274, 320, 358, 400	SE: <i>Problem Solving Skills 30-31, 138-139, 216-217, 274-275, 326-327, 388-389, 446-447, 550-551, 572-573, 624-625</i>

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>6.2 E/S</p> <p>Apply previous experience and knowledge to new problem-solving situations.</p>	<p>SE: 72-73, 128-129, 306-307, 366-367, 460-461, 502-503 <i>Chapter Investigation 259</i> <i>Portfolio 299</i></p> <p>ATE: EL 30, 73, 189, 280, 364</p>	<p>SE: 93 #19, 160 Example 4, 251 #36-#40, 274, 356 Example 3, 358, 377 Example 3, 481 #19 <i>MathWorks 221, 253</i></p>	<p>SE: <i>Problem Solving Skills 216-217</i></p> <p>Each section contains Extended Practice Exercises that enable students to apply what they have learned to new, more challenging problem-solving situations, for example:</p> <p>SE: 13 #33-#35, 59 #31-#35, 175 #29-#34, 233 #23-#25, 299 #35, #36, 345 #15, #16, 415 #21-#24, 537 #41-#46, 621 #24-#30</p>
<p>6.5 E/S</p> <p>Verify, interpret, and evaluate results with respect to the original problem situation, determining an efficient <b>strategy</b> for the given situation. S 21.5.3; S 21.12.3</p>	<p>SE: 128-129, 238-239, 294-295, 366-367, 460-461</p> <p>ATE: EL 364 GS 20, 128, 294, 366 TS 71</p>	<p>SE: 115 #20, 155 #9, 233 #8, 256 Example 4, 356 Example 3 <i>Problem Solving Tip 163, 363, 378, 479</i></p> <p>ATE: TT 478</p>	<p>SE: 54 #13, 73-74, 175 #30, 299 #33, 475 #44, 491 #38, 582 #15 <i>Problem Solving Skills 624-625</i></p> <p>The 5-Step Plan has students verify the reasonableness of their answers, for example:</p> <p>SE: 139 <i>Are You Ready? 3</i></p>
<p>6.7 E/S</p> <p>Apply multi-step, integrated, mathematical problem-solving strategies, persisting until a solution is found or until it is clear that no solution exists. S 19.12.2</p>	<p>SE: 498-501, 502-505 <i>Connections 201</i> <i>Critical Thinking 45</i> <i>Technology 345</i></p> <p>ATE: EL 364</p>	<p>SE: 26 Problem, 125 #50, 163 Example 2, 346 Example 3, 357 #36, 391 Example 2, 427 Example 3, 462</p> <p>ATE: CE 275</p>	<p>SE: <i>Are You Ready? 3</i> <i>Problem Solving Skills 30-31, 138-139, 216-217, 274-275, 326-327, 446-447, 550-551, 572-573, 624-625</i></p>

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
6.9 Generalize solutions and strategies from earlier problems to new problem situations. E/L	SE: 498-501, 502-505 <i>Chapter Investigation</i> 51, 103, 155, 305 <i>Data File</i> 87, 107, 263, 367 ATE: EL 119, 157 GS 170	SE: 116 #1-#4, 351 #33, 356 Example 3, 411 #64, 429 #28, 446 #1-#3, 489 Example 2, 509 #7-#10 <i>Problem Solving Tip</i> 391 ATE: EL 163	SE: <i>Connections</i> 195, 419, 629 <i>Problem Solving Skills</i> 502-503 ATE: E 434, 459, 508, 546 T 319, 627 Additionally, each section contains Extended Practice Exercises that ask students to apply what they have learned to new, more challenging problem-solving situations.
6.10 Interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, selecting and justifying efficient methods and/or strategies, and ensuring the answer is reasonable. E/S	SE: 478-481, 488-491, 498-501 <i>Chapter Investigation</i> 51, 155, 259, 393 <i>Problem Solving Strategy</i> 460-461 ATE: EL 189, 489	SE: 26 Problem, 93 #22-#24, 400-401, 485 Example 3, 508-509 <i>Problem Solving Tip</i> 123, 212, 427 ATE: CE 509 EL 508 GS 154	SE: 439 #17 <i>Problem Solving Skills</i> 138-139, 624-625 ATE: C 139, 625 T 625 <i>Reteaching</i> : 50, 214
6.11 Apply combinations of proven strategies and previous knowledge to solve non-routine problems. E/L	SE: 19 #30-#39, 145 #62, 506-509 <i>Chapter Investigation</i> 259, 305, 435 <i>Cooperative Learning</i> 429, 513 ATE: TT 238, 288	SE: 119 #45, 321 #20, 347 #38, 357 #36, 393 #65, 411 #65, 439 #39, 455 #29, 551 #21 <i>MathWorks</i> 361	This objective is met throughout the text in the Extended Practice Exercises in each section as well as in many of the TE activities, such as: ATE: E 22, 434, 508, 546 T 160, 223, 303, 349, 479, 543

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
6.13 E/L Use technology, including calculators, to solve problems and verify solutions. S 24.5.5; S 24.8.5	SE: 21 #16, 111 #62, 267 #55 <i>Chapter Investigation</i> 207 <i>Technology</i> 45, 149, 345 ATE: EL 277 TT 289	SE: 39, 92 #7-#9, 139 #44-#51, 215 #28, 270 #31, 271 #37, 392 #46, 425 #41-#44, 439 #34	SE: 84 Example 3, 85 #10, 87 Example 3, 166 #7, Example 3 247 #35-#37, 255, 364 #20-#23, 395 #30, 522-523 #13, #15, #21, #22 <i>Problem Solving Skills</i> 30-31 Teachers and students should also refer to the Technology Reference Guide, pages 660-665.
6.14 E/L Use technology, including calculators, to investigate, define, and describe quantitative relationships such as patterns and functions. G 7.12.3; S 1.5.1; S 1.12.2; S 1.12.4; S 14.8.6; S 24.5.5; S 24.8.5	SE: 128 #3-#4, 135 #73, 321 #37, 383 #24 <i>Chapter Investigation</i> 305, 435 <i>Technology</i> 45, 345 ATE: EL 285, 336 TS 483	SE: 92 #7-#9, 266 Example 4, 270 #31, 271 #34, #37, 392 #46, 507 #28 <i>Alternative Assessment</i> 97, 237 <i>Technology Note</i> 269	SE: 64 Example 3, 65 #12-#14, 522-523 #13, #15, #21, #22, 526 #1-#4, #9-#14, 532 #7-#15, 563 Example 3, 566-567, 616 #21 Calculators can be used to explore other patterns and functions, for example: SE: 52-55 <i>Problem Solving Skills</i> 550-551
<b>Mathematical Communication</b>			
<b>Process Standard 7.0: Students will develop their ability to communicate mathematically by solving problems in which there is a need to obtain information from the real world through reading, listening, and observing in order to: translate this information into a mathematical language and symbols; process this information mathematically; and present results in written, oral and visual formats.</b>			
7.1 E/L Discuss and exchange ideas about mathematics as a part of learning. E 10.2.3; E 10.3.3; E 10.5.3; E 10.3.1; E 10.5.1; E 10.12.1; S 23.5.2	SE: <i>Chapter Investigation</i> 259, 435 <i>Critical Thinking</i> 345 <i>Technology</i> 45, 149 <i>Using Other Resources</i> 201 ATE: EL 53, 91 LS 278	SE: 37 #17, 69 #45, 118 #10, 124 #10, 171 #21, 209 #34, 251 #33 ATE: GS 10 TT 72, 83	Cooperative Learning and Math Journal suggestions occur throughout the text, for example: ATE: E 266, 365, 390 T 109, 147, 209 Many sections open with a group work activity, such as on pages 86, 172, and 540. See <i>Working Together</i> on the opening page of each chapter.

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>7.2 E/L Use inquiry techniques (e.g., discussion, questioning, research, data gathering) to solve mathematical problems. E 4.2.3; E 10.2.2; E 10.3.2; E 10.5.2; E 10.8.2; E 11.2.1; E 11.3.1; E 11.5.1; E 11.8.1; E 11.12.1; E 11.2.2; S 1.5.1; S 1.8.1; S 1.8.4; S 1.12.4; S 10.5.2; S 14.8.6; S 21.3.1</p>	<p>SE: 461 #20-#23 <i>Chapter Investigation 51</i>, 207, 393, 435 ATE: CE 14 EL 11, 80, 280</p>	<p>SE: 23 #14, 38 #14, 93 #20, 138 #13, 159 Example 2, 225 #34-#35, 251 #36-#40, 266 Example 4, 269 Example 2 ATE: EL 59</p>	<p>SE: <i>Problem Solving Skills</i> 388-389 <i>Working Together</i> 383 See <i>Alternative Assessment</i> at the end of each chapter, for example: SE: <i>Connections</i> 331, 419 <i>Cooperative Learning</i> 97 <i>Critical Thinking</i> 237, 629 <i>Technology</i> 597 <i>Using Other Resources</i> 195, 513</p>
<p>7.3 I/L Read expository text to learn about mathematics. E 1.8.3; E 1.12.3; E 2.12.3; E 4.8.1; E 4.8.2; E 4.8.3</p>	<p>SE: <i>Chapter Investigation 51</i>, 207, 435 ATE: EL 53, 80, 91, 133</p>	<p>SE: 439 #38 <i>Alternative Assessment</i> 143, 327 ATE: DA 103, 149, 191</p>	<p>Students read about math in <i>Build Understanding</i> at the beginning of each section, such as: SE: <i>Build Understanding</i> 10, 56, 178-179, 282, 338, 436 Students read about about math-related careers in each <i>MathWorks</i> section in every chapter, such as: SE: <i>MathWorks</i> 133, 453, 549, 623</p>
<p>7.6 E/S Interpret and solve word problems without the necessity of key words or phrases.</p>	<p>SE: 506-509 <i>Chapter Investigation 51</i>, 207, 435 ATE: EL 16, 24, 75, 91 TS 123</p>	<p>SE: 62, 63 Example 3, 65 #49-#52, 164 #17-#18, 275 #15, 277 Example 2, 345 Example 2, 357 #29-#31, 400-401, 411 #66</p>	<p>Most of the sections in this book have at least one word problem. The following are examples: SE: 3, 208-209 #11-#21, 232-233 #10-#21, #23-#25, 266-267 #12-#15, #18-#20, 285, 298-299 #18-#21, #28-#33, 537 #38-#45, 582-583 #7-#23 <i>Problem Solving Skills</i> 138-139, 216-217</p>

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>7.9 Model and explain mathematical relationships using oral, written, graphical, and algebraic methods. E 5.8.1; E 5.8.2; E 6.8.2; E 11.8.5; E 11.12.5; S 1.12.2; S 1.12.4; S 14.8.6; S 20.12.1; S 22.8.2; S 22.12.2</p>	<p>E/S SE: 9 #35-#36, 99 #10, 201, 461 #20-#23, 506-509 <i>Chapter Investigation</i> 305, 435 <i>Connection</i> 97, 149 <i>Cooperative Learning</i> 429 ATE: EL 24, 157 LS 278, 297</p>	<p>SE: 58-59 Example 4, #31-#34, 68 Example 4, 82 #1-#5, 93 #19, 115 #20, 153 #22, 195 #30, 209 #31, 302 #25, 363 Example 3</p>	<p>SE: 62-63, 64 #1, #2, 72, 74, 244-247, 520-523 <i>Are You Ready?</i> 516-517 <i>Modeling/Using Manipulatives</i> 45 ATE: E 68, 255</p>
<p>7.10 Evaluate the effectiveness of written and oral presentations of mathematics. S 21.5.3; S 23.5.2</p>	<p>I/L SE: <i>Chapter Investigation</i> 45, 149, 345, 513 <i>MathWorks</i> 289 ATE: EL 24 GS 20</p>	<p>SE: 75 #59, 79 #46, 111 #45, 175 #26, 218 #30, 246 #18, 344 #1-#3, 357 #28, 411 #55, 445 #30</p>	<p>The following student presentations can be evaluated: SE: <i>Chapter Investigation</i> 143, 419, 461, 513 <i>Role Reversal</i> 419 <i>Technology</i> 45 <i>Using Other Resources</i> 195</p>
<p>7.11 Make conjectures and present arguments in discussions of mathematical ideas. S 21.5.3; S 23.5.3</p>	<p>E/L SE: 482-485, 487, 488-491, 496, 505 #14 <i>Portfolio</i> 513 ATE: EL 364, 489 TT 496</p>	<p>SE: 149 #5, 246 #18, 344 #1-#3, 357 #28, 411 #55, 445 #30, 477 #23, 491 #34 <i>Alternative Assessment</i> 45, 369</p>	<p>SE: 124-127, 134-137, 160-163 <i>Problem Solving Skills</i> 138-139, 170-171 <i>Review and Practice Your Skills</i> 132 #1-#8 ATE: C 125 <i>Enrichment</i>: 52 <i>Extra Practice</i>: 40 <i>Reteaching</i>: 44</p>
<p>7.14 Explain and evaluate thinking about mathematical ideas and solutions based on the role of definitions, properties, common rules, and symbols in solving problems.</p>	<p>I SE: 8 #12-#16, 10-13, 35, 36 <i>Connections</i> 97 <i>Using Other Resources</i> 201 ATE: EL 75, 91, 239 TT 140</p>	<p>SE: 54 #22, 124 #37, 161 #20, 205 #43, 215 #20, 247 #36, 257 #39, 308 Example 4, 312 #15, 351 #33</p>	<p>SE: 34-36, 37 #45-#48, 251 #24, 257 #24, 405 #15, 536 #9, 568 #8, 616 #36 ATE: E 523, 584</p>

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
7.15 Use everyday language to explain thinking about strategies and solutions to mathematical problems. S 21.5.3; S 23.5.3	E/L SE: 99 #10 <i>Chapter Investigation 45</i> <i>Cooperative Learning 513</i> <i>Problem Solving Skills 20-21, 460-461, 502-503</i> ATE: EL 189, 284 LS 297	SE: 31 #23, 134 #10, 155 #9, 163, 222, 311 Example 3, 318 #17, 320, 351 #33, 410 #4	SE: 13, #30, 31 #5, 79 #35, 185 #25, 190 #15, 586 #9, 607 #25 ATE: E 40, 206 T 577
7.16 Express mathematical ideas and use them to define, compare, and solve problems orally and in writing.	E/S SE: 8 #12-#16, 13 #47, 35-36 <i>Chapter Investigation 45</i> <i>Critical Thinking 253</i> <i>Using Other Resources 201</i> ATE: EL 24, 75 TT 140	SE: 82 #1-#5, 268 #1-#7, 296 #1-#5, 300 #1-#4, 357 #1-#4, 404 #1-#4, 478 #1-#3, 484 #1-#3, 504 #1-#5	SE: 181 #26-#28, 232 #13, 509 #40 ATE: E 135, 198, 296, 327, 405, 558, 563
7.17 Use mathematical notation to communicate and explain mathematical situations. S 21.2.1	E/L SE: 132-135, 136-139 <i>Technology 149</i> ATE: EL 133 LS 136, 141	SE: 213, 216-217, 245 Example 2, 267 #26, 295 #2, 317 Example 2, 532, 580 <i>MathWorks 273 #4-#5</i> ATE: TT 130	SE: 16-19, 38-41, 56-59, 104-106, 108-110, 154, 300, 469, 562, 604

CONTENT STANDARDS	PAGE REFERENCES			
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>	
<b>Mathematical Reasoning</b>				
<b>Process Standard 8.0: Students will develop their ability to reason mathematically by solving problems in which there is a need to investigate significant mathematical ideas and construct their own learning in all content areas in order to justify their thinking; reinforce and extend their logical reasoning abilities; reflect on and clarify their own thinking; and ask questions to extend their thinking.</b>				
8.3 Construct, justify, and defend mathematical conclusions using logical arguments, in situations related to mathematics, science, and technology. E 10.12.4; G 7.12.4; S 1.8.1; S 1.8.4; S 1.12.4; S 14.8.6	I/L	SE: 18 #28-#29, 83 #44-#46, 145 #69-#70 <i>Chapter Investigation 97, 207, 305, 393</i> <i>Critical Thinking 45</i> <i>MathWorks 269, 333</i>	SE: 530-531, 534 #5-#8, #13-#16, 542-543, 548-551 <i>Review 553 #19-#20</i> <i>Review and Practice Your Skills 536 #1-#4, #18-#20, 546 #8-#12</i> ATE: CE 531 LW 531 <i>Extra Practice Worksheet: 551</i>	SE: 124-127, 128-131, 134-137 <i>Are You Ready? 101 #20-#26</i> <i>Problem Solving Skills 138-139</i> <i>Review and Practice Your Skills 132-133</i> Teachers can also create Math problems using the following Data Files to fulfill this objective: SE: <i>Architecture 636-637</i> <i>Earth Science 638-639</i> <i>Mathematics 652-655</i> <i>Science 646-647</i>
8.4 Use patterns and relationships to analyze mathematical situations; draw logical conclusions about mathematical problems. Ec 3.8.2; Ec 3.8.3; Ec 9.8.4; Ec 3.12.1; Ec 3.12.2; Ec 3.12.3; Ec 3.12.4; Ec 6.12.6; G 7.12.4; S 17.3.2	E/S	SE: 83 #44-#46, 263 #48-#50, 373 #25-#26, 478-481 <i>Problem Solving Strategy 128-129, 170-171, 238-239</i> <i>Chapter Investigation 155, 201, 305</i> ATE: EL 129, 157, 336	SE: 92-93, 274-275, 542-545 <i>Are You Ready? 241 #39-#48</i> <i>Review 95 #41-#42</i> ATE: CE 93, 275 EL 545 LW 93, 275 <i>Reteaching Worksheet: 93</i>	SE: 52-55, 124-127, 128-131, 492-495 <i>Critical Thinking 143</i> <i>Problem Solving Skills 138-139</i> <i>Review and Practice Your Skills 132-133</i> ATE: E 53, 127 T 125

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
8.5 Follow a logical argument and judge its validity. E 4.8.4; E 4.12.4	E/L SE: 36 #16-#21, 83 #44-#46, 117 #71-#75, 498-501, 502-505 <i>Chapter Investigation</i> 155, 201, 207 <i>Connections</i> 149 <i>MathWorks</i> 289, 333 <i>Problem Solving Strategy</i> 238-239	SE: 530, 531 #6-#8, 534 #5-#8, #13-#16, 539, 541 #27, 543 Example 3, 548-551 <i>Review and Practice Your Skills</i> 536 #1-#4, #18-#20 <i>Extra Practice Worksheet</i> : 551	SE: 124-127, 128-131, 134-137 <i>Connections</i> 143 <i>Extra Practice</i> 3-5 693, 3-6 694 <i>Logical Reasoning</i> 101 <i>Problem Solving Skills</i> 138-139 ATE: C 139 <i>Enrichment</i> : 56
8.7 Recognize and apply deductive and inductive reasoning in both concrete and abstract contexts.	E/S SE: 83 #44-#46, 117 #71-#75, 482-485, 488-491 <i>Chapter Investigation</i> 155, 305, 435 <i>Connections</i> 149, 201 <i>Mathworks</i> 333 <i>Problem Solving Strategy</i> 238-239	SE: 538-541, 542-545 <i>Review and Practice Your Skills</i> 546 ATE: CE 539 EL 541, 545 <i>Enrichment Worksheet</i> : 541 <i>Extra Practice Worksheet</i> : 541 <i>Reteaching Worksheet</i> : 540, 544	SE: 124-127, 128-131, 134-137 <i>Extra Practice</i> 3-5 693, 3-6 694, 3-7 694 <i>Problem Solving Skills</i> 138-139 <i>Review</i> 141 #14-#17 ATE: E 135 T 124
8.8 Ask questions to reflect on, clarify, and extend thinking.	E/L SE: 225 #44, 373 #25-#26 <i>Chapter Investigation</i> 155, 393, 435 <i>Connections</i> 149 <i>Critical Thinking</i> 45 <i>MathWorks</i> 269	SE: 215 #27, 251 #39, 351 #31-#32, 429 #27, 455 #29, 532 #1-#2, 544 #6-#13 <i>Are You Ready?</i> 517 #15-#18 ATE: EL 545	SE: <i>Modeling/Using Manipulatives</i> 419
8.9 Review and refine the assumptions and steps used to derive conclusions in mathematical arguments.	I/L SE: 93 #24-#28, 117 #21-#25, 425 #11-#17 <i>Chapter Investigation</i> 305, 435 <i>MathWorks</i> 217 <i>Portfolio</i> 97 <i>Problem Solving Strategy</i> 238-239 <i>Technology</i> 45	SE: 530-531, 539, 674 <i>Are You Ready?</i> 517 #11-#14 <i>MathWorks</i> 547 ATE: CE 531, 539 LW 531 TT 539 <i>Extra Practice Worksheet</i> : 541	SE: 128-131, 134-137 ATE: C 133 E 127 <i>Extra Practice</i> : 42, 44

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
8.10 Construct valid arguments; make and test conjectures about algebraic and geometric properties based on mathematical principles. E 10.12.4	I/L SE: 83 #36-#37, 215 #45-#47, 488-491, 507, 513 <i>Chapter Investigation</i> 155, 201, 207 <i>Problem Solving Strategy</i> 170-171, 238-239 ATE: EL 67, 125, 157, 489	SE: 519 #5, 530-531, 541 #26 <i>MathWorks</i> 547 ATE: EL 545 LW 540 <i>Enrichment Worksheet:</i> 541 <i>Extra Practice Worksheet:</i> 541, 551 <i>Reteaching Worksheet:</i> 540	SE: 124-127, 128-131 <i>Problem Solving Skills</i> 138-139 <i>Review and Practice Your Skills</i> 132 #9-#16 <i>Enrichment:</i> 56 <i>Extra Practice:</i> 54 <i>Reteaching:</i> 46, 50
8.11 Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems.	E/S SE: 127 #74-#78, 135 #74-#76, 273 #42, 478-481 <i>Chapter Investigation</i> 155, 305, 435 <i>MathWorks</i> 217, 487 <i>Technology</i> 45	SE: 31 #23, 529, 550 #11 <i>Chapter Investigation</i> 519 <i>MathWorks</i> 547 ATE: LS 517	SE: 154-157 <i>Cumulative Assessment</i> 99, 239, 379, 515, 631 <i>Review and Practice Your Skills</i> 158-159 ATE: E 146 T 379
<b>Mathematical Connections</b>			
<b>Process Standard 9.0: Students will develop the ability to make mathematical connections by solving problems in which there is a need to view mathematics as an integrated whole, identifying relationships between context strands, and integrating mathematics with other disciplines, allowing the flexibility to approach problems in a variety of ways within and beyond the field of mathematics.</b>			
9.1 Link new concepts to prior knowledge.	E/L SE: 84-87, 132-135, 174-177, 178-181 <i>Problem Solving Strategy</i> 238-239 ATE: EL 20, 119, 157, 268, 364 TT 260, 433	SE: 76, 86-87, 132-135, 136-139, 162, 178, 254, 258, 264-267, 390	See <i>Are You Ready?</i> at the beginning of each chapter. See <i>5-Minute Warm-Up</i> in the ATE at the beginning of each section.
9.2 Use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics.	E/S SE: 145 #69, #70, 190 #22, 191 #33, 201, 308-311, 478-481 <i>Data Activity</i> 103 <i>Portfolio</i> 299 <i>Technology</i> 149 ATE: EL 157	SE: 75 #63, 107 #36-#38, 118 #11, 119 #44, #51, 135 #47, 153 #16, #19, 337 #39, 359 #10, 382 #47-#49	SE: 212-215 <i>Cumulative Assessment</i> 239 #9 <i>Review and Practice Your Skills</i> 218

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
<p>9.3 Use models to explain the relationship of concepts to procedures. S 1.5.1; S 1.8.1; S 1.12.2; S 1.8.4; S 1.12.4; S 10.5.2; S 14.8.6; S 20.5.1</p>	<p>E/S SE: 66, 80, 159 #41, 232, 352-355, 478-481 <i>Chapter Investigation</i> 103 <i>Connections</i> 149, 384 <i>Problem Solving Strategy</i> 366-367, 424-425 ATE: EL 157 LS 278</p>	<p>SE: 72 #1-#4, 108 #1-#5, 111 #48-#50, 114 #1-#4, 118 Example 4, 139 #52, 358-359, 390 #1-#4</p>	<p>SE: 62, 64 #1, #2, 74 #1, 500 #15, 534 Example 1, 536 #1-#3 <i>Modeling</i> 478, 492 <i>Modeling/Using Manipulatives</i> 45 <i>Working Together</i> 149</p>
<p>9.4 Use the connections among mathematical topics to develop multiple approaches to problems. S 20.8.1</p>	<p>I/L SE: 24-27, 28-31 <i>Chapter Investigation</i> 45, 103, 201 <i>Problem Solving Strategy</i> 128-129, 238-239, 460-461 ATE: EL 25, 195, 341 LS 297 TT 238</p>	<p>SE: 105, 126, 132, 244-245, 248-249, 254-255, 390-391, 436-437 <i>Review and Practice Your Skills</i> 120 #4-#7 ATE: EL 245</p>	<p>SE: <i>Connections</i> 419 <i>Problem Solving Strategies</i> 502-503, 624-625 ATE: T 553, 556</p>
<p>9.6 Use and analyze the connections between mathematics and other disciplines. Ec 2.8.2; Ec 2.12.4; Ec 2.12.8; H 2.8.3; H 2.12.3; S 2.12.1; S 14.12.5</p>	<p>I/L SE: 145 #69-#70, 191 #33, 196 #22 <i>Chapter Investigation</i> 103, 305, 435 <i>MathWorks</i> 15, 403 <i>Technology</i> 149 ATE: CE 14 EL 73, 157 IC 295</p>	<p>SE: 75 #63, 89 #47, 107 #36-#38, 139 #42, 198 #19, 257 #35-#37, 269 Example 2, 270 #28-#30, 277 Example 2, 389 #47</p>	<p>There are numerous examples that meet this objective throughout the text, such as: SE: 39 Example 3, 127 #10, 205 #28, 257 #21, 306-309, 387 #17, 440 Example 1, 527 #19, 582 #8-#15, 610-611 #17-#22</p>

CONTENT STANDARDS	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
9.7 E/L Apply mathematical thinking and modeling to solve problems that arise in other disciplines (e.g., rhythm in music and motion in science). S 1.5.1; S 1.8.1; S 1.12.2; S 1.8.4; S 1.12.4; S 10.5.2; S 14.8.6; S 19.12.2	SE: 132-135 <i>Chapter Investigation</i> 103, 305 <i>MathWorks</i> 403 <i>Technology</i> 149 ATE: EL 133, 233 IC 295 LS 278	SE: 125 #40, 163 Example 3, 198 #19, 205 #43, 257 #35-#37, 261 #44, 298 #20 <i>MathWorks</i> 157, 221, 253	There are numerous examples that meet this objective throughout the text, such as: SE: 398-399 #18, #19, #26-#29, 501 #53, 519, 522-523 #17, #18, 527 #21-#23, 582 #8-#15, 587 #11, 606-607 #19-#21, #23, #24, 620-621 #16, #17, #30 <i>Critical Thinking</i> 555
9.8 I/S Identify, explain, and use mathematics in everyday life. Ec 2.3.2; Ec 2.12.12; Ec 5.2.1; Ec 5.3.1; S 24.12.2	SE: 19 #30-#39, 145 #69-#70 <i>Chapter Investigation</i> 45, 103, 305, 435 <i>Connections</i> 149, 201 <i>MathWorks</i> 165 <i>Portfolio</i> 299 <i>Problem Solving Strategy</i> 238-239 ATE: EL 73, 133, 157 IC 295	SE: 59 #28, 93 #16-#18, 111 #47, 134 #11, 170 #13, 205 #35, 217 Example 3, 228 #22, 278 #18, 263 Example 3	SE: 9 #34, 13 #27, 22 #22, 29 #37, 55 #21, 64 #5, 75 #33, 84-85 #1-#14, 308 #6, 309 #9-#16

### Codes Used for ATE Pages

#### *MathMatters 1*

CE Chalkboard Examples  
 CP Chapter Project  
 EL Extend the Lesson  
 GS Getting Started  
 IC Interdisciplinary Connections  
 LS Learning Styles  
 TS Teaching Strategies  
 TT Teaching Tip

#### *MathMatters 2*

CE Chalkboard Examples  
 DA Data Activity  
 EL Extend the Lesson  
 GS Getting Started  
 LS Learning Styles  
 LW Lesson Wrap-up  
 TS Teaching Strategies  
 TT Teaching Tip

#### *MathMatters 3*

C Chalkboard Examples  
 E Extend the Lesson  
 L Learning Styles  
 T Teaching Strategies