



ARIZONA
Mathematics Standard High School
***MathMatters 1, MathMatters 2, MathMatters 3* © 2006**

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
Strand 1: Number Sense and Operations			
Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.			
Concept 1: Number Sense			
Understand and apply numbers, ways of representing numbers, the relationships among numbers and different number systems.			
PO 1. Classify real numbers as members of one or more subsets: natural, whole, integers, rational, or irrational numbers.	SE: 118-121, 122	SE: 52, 54 #18-#21, 55 #45-#48, 93 #22-#24 <i>Review and Practice Your Skills</i> 60 #13-#18, 91 #57-#60 ATE: 5MW 52 LW 54	SE: 10-13, 19 #35-#41
PO 2. Identify properties of the real number system: commutative, associative, distributive, identity, inverse, and closure.	SE: 104-107, 118-121, 123, 131, 197 #31-#36, 222-225, 228-231 ATE: DI 118 ETL 119	SE: 66-67 Example 1, Example 2, 72, 76-77, 390 <i>Are You Ready?</i> 375 #27-#32 <i>Problem-Solving Tip</i> 391 <i>Think Back</i> 66 ATE: DI 77 I 76, 390 TT 72, 76	SE: 20-23, 26, 34-37

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 3. Distinguish between finite and infinite sets of numbers.	SE: Sections 7-3 and 7-4 would be appropriate sections for the teacher to use to tie in this concept.	SE: 520-521 Example 1, 522 #9-#14 <i>Mid-Chapter Quiz</i> 537 #1-#4 <i>Review and Practice Your Skills</i> 528 #1-#6 ATE: LW 522 #4 SP 528	SE: 6-9, 19 #43-#46, 55 #23-#28 This objective could be integrated with Section 1-2.
Concept 2: Numerical Operations			
Understand and apply numerical operations and their relationship to one another.			
PO 1. Select the grade-level appropriate operation to solve word problems.	SE: 10-13, 59 #50, 87 #45, 93 #21, 111 #49, 117 #61, 121 #46, 125 #70-#72, 135 #58-#59, 139 #54	SE: 59 #28-#29, 62-65, 68 #14, 69 #44, 77 Example 3, 78 #36-#37, 79 #45, #50 ATE: CE 63 EL 79 LW 64	SE: 23 #27, 29 #38, 55 #21, 75 #33, 205 #35, 215 #17, 227 #16, 261 #14, 270 #17, 298 #20
PO 2. Solve word problems using grade-level appropriate operations and numbers.	SE: 59 #53, 87 #54, 107 #48, 111 #49, 117 #62-#63, 121 #47, 125 #64, 135 #69, 139 #54, 145 #63	SE: 59 #30, 77 Example 3, 84 #34, 85 #35-#37, 123 Example 2, 135 #39, 269 Example 2, 345 Example 2 <i>MathWorks</i> 113 #2-#3 <i>Standardized Test Practice</i> 145 #20-#24	SE: 22 #22, 37 #42, 69 #45, 85 #14, 111 #25, 208 #15, 233 #20, 266 #15, 285 #19, 303 #15
PO 3. Simplify numerical expressions including signed numbers and absolute values.	SE: 104-107, 108-111, 114-117, 124-127, 132-135, 208-211, 212-215, 218-221 ATE: DI 105 ETL 112	SE: 56-57 Example 1, Example 2, 58 #1-#6, #13-#21, 66-67 Example 1, Example 2, 68 #1-#8, #15-#35, 76-79 <i>Review and Practice Your Skills</i> 60 #25-#30, 70 #29-#52 ATE: CE 57, 67 LW 68, 78	SE: 10-13, 20-23, 26-29, 31 #15-#22, 34-37, 38-41, 62-65, 69 #49-#56, 75 #38-#49 ATE: ETL 29, 41

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 4. Apply subscripts to represent ordinal position.	SE: 325, 335	SE: 245, 249, 256 <i>Check Understanding</i> 245 ATE: AA 246	SE: 244-247, 248-251, 254-257, 337, 544-547 This objective could be brought into Lesson 7-6 for the formula for the median of a trapezoid $\frac{1}{2}(b_1 + b_2)$.
PO 5. Use grade-level appropriate mathematical terminology.	SE: 82 #14, 93 #28, 107 #46, 111 #61, 215 #47, 221 #52, 225 #46, 231 #65, 249 #40, 267 #54	SE: 72, 82, 114, 150, 202, 244, 258, 264, 474, 520	SE: 13 #30, 19 #32, 41 #33, 55 #22, 69 #24, 79 #35, 85 #16, 128-131, 134-137, 313 #10, 319 #10
PO 6. Compute using scientific notation.	SE: 132-135, 139 #53-#56, 321 #50	SE: 89 #47-#48 ATE: AA 88 EL 107	SE: 38-41, 75 #50-#56, 137 #11-#22, 175 #37-#42, 261 #26-#29 ATE: ETL 39, 41
PO 7. Simplify numerical expressions using the order of operations.	SE: 114-117 ATE: AA 115 DI 114 ETL 124	SE: 56-59, 67 Example 3, 74 #1-#12, #15-#47 <i>Review and Practice Your Skills</i> 70-71 #27-#70, #79-#80 ATE: 5MW 72 CE 57, 67 EL 57 LW 58 TT 56	SE: 20-23, 26-29, 34-37, 38-41, 56-59, 466, 468-471, 472-475, 478-481
Concept 3: Estimation			
Use estimation strategies reasonably and fluently.			
PO 1. Solve grade-level appropriate problems using estimation.	SE: 21 #9-#10, 30 #10-#11, 52-55, 63 Ex 3, 90-93, 260, 460-463 ATE: TT 142 Teachers can encourage students to use estimation when solving equations like those on pages 208-211 and 212-215.	SE: 136 #3, 245 Example 2, 270 #29-#30 <i>Are You Ready?</i> 5 #29-#40 <i>Chapter Assessment</i> 289 #27 ATE: CE 4 EL 284 TT 4	SE: 20-23, 65 #31-#38 Teachers should encourage students to use estimation when multiplying/dividing on pages 26-29 and when solving equations like those on pages 66-69, 72-75, and 76-79.

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 2. Determine if a solution to a problem is reasonable.	SE: 502-505 ATE: ETL 503 Teacher can encourage students to determine reasonableness of solutions to the measurement problems found on pages 52-55, 56-59, 62-65, 66-69, 80-83, 84-87, 90-93, and for reading protractors on pages 156-159.	SE: 138 Example 4, 272 #27 <i>Problem-Solving Tip</i> 123 ATE: GS 92, 108, 274	SE: 20-23 ATE: TT 427 The following references can be tied in to meet this objective. SE: 22 #9, 74 #8, 107 #20, 162 #9, 175 #30, 215 #17, 299 #33, 405 #10, 582 #15
PO 3. Determine rational approximations of irrational numbers.	ATE: TT 142 The calculator is used on pages 142-145.	SE: <i>Are You Ready?</i> 103 #39-#41, #43-#45	SE: 10-13, 55 #23, 426-429 ATE: TT 427
Strand 2: Data Analysis, Probability, and Discrete Mathematics			
Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.			
Concept 1: Data Analysis (Statistics)			
Understand and apply data collection, organization and representation to analyze and sort data.			
PO 1. Formulate questions to collect data in contextual situations.	SE: 6-9 <i>Chapter Investigation</i> 3, 9 #37 Teachers should take advantage of the <i>Datafile</i> found in the back of the textbook on pages 518-535.	SE: 7 Example 1, 8-9, 37 #16 ATE: 5MW 6 EL 7 LW 8 TT 6	SE: <i>Chapter Investigation</i> 49, 89 #20 ATE: FG 408 Teachers should take advantage of the <i>Datafile</i> found in the back of the textbook on pages 644-653..
PO 2. Organize collected data into an appropriate graphical representation.	SE: 16-19, 20-21, 24-27, 28-32, 34-37, 38-41 <i>Chapter Investigation</i> 3, 31 #27, 41 #36 ATE: ETL 39	SE: 16-19, 21 Example 2, 22 #5, 38-41, 153 #24-#25 ATE: CE 17, 21, 29, 39 LW 40	SE: 82-85, 86-89, 92-93, 127 #21-#24, 383, 406-409, 446-447
PO 3. Display data as lists, tables, matrices, and plots.	SE: 6-9, 16-19, 28-31, 34-37, 38-41 <i>Chapter Investigation</i> 3 ATE: ETL 16, 30	SE: 16-19, 20-23, 28-31, 38-41 ATE: 5MW 16, 38 CE 17, 21, 29, 39	SE: 127 #21-#24, 406-409

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 4. Construct equivalent displays of the same data.	SE: 30 #7-#8 The following pages simply convert tables to graphs: 16-19, 20-21, 24-27, 28-31, 34-37, 38-41. The <i>Datafile</i> on pages 518-535 could be used by the teacher for this objective.	SE: 16 #1-#2, 17 Example 2, 19 #17-#18 <i>MathWorks</i> 33 <i>Mid-Chapter Quiz</i> 25 #5, #7 ATE: LW 18	SE: 92-93, 383 See the <i>Datafile</i> on pages 644-653 to help meet this objective.
PO 5. Identify graphic misrepresentations and distortions of sets of data.	Sampling and bias are discussed on pages 6-9. Bar graphs and line graphs are taught on pages 28-31 and 34-37. The teacher could extend the lesson in these sections to cover this objective.	SE: 7, 9 #22-#24, 23 #16, 34-37 ATE: AA 34 CE 35 LW 36	SE: 92-93 ATE: ETL 93
PO 6. Identify which of the measures of central tendency is most appropriate in a given situation.	SE: 10-13, 19 #41, 27 #29-#35, 65 #43-#44 ATE: ETL 35	SE: 11 Example 2, 12 #11, #15, 12 #25-#27, 35 Example 2, 37 #13 ATE: CE 11 I 20, 28 L 15 LW 12, 36	SE: 82-85
PO 7. Make reasonable predictions based upon linear patterns in data sets or scatter plots.	SE: 28-31, 34-37, 83 #44-#46, 87 #58-#60	SE: 20 #5, 23 #7, #12, 26 Problem, 37 #15 ATE: 5MW 20 EL 21, 27	SE: 406-409, 412-415 ATE: AA 409 FG 408
PO 8. Make reasonable predictions for a set of data, based on patterns.	SE: 20-21, 28-31, 34-37, 38-41, 83 #44-#46, 87 #58-#60, 127 #78, 139 #60-#61, 306-307, 324	SE: 20 #5, 23 #7, #12, 26 Problem, 37 #15 ATE: 5MW 20 EL 21, 27	SE: 406-409, 412-415 The following references can be tied in to meet this objective. SE: 52-55, 124-127 ATE: FG 179

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 9. Draw inferences from charts, tables, graphs, plots, or data sets.	SE: 16-19, 20-21, 24-27, 28-31, 34-37, 38-41, 83 #44-#46, 87 #58-#60	SE: 31 #15, 37 #14, 341 #38 <i>Standardized Test Practice</i> 47 #25 ATE: 5MW 20 CE 7 EL 27, 29 I 34	SE: 82-85, 86-89, 92-93, 406-409, 412-415, 446-447
PO 10. Apply the concepts of mean, median, mode, range, and quartiles to summarize data sets.	SE: 10-13, 19 #40-#42, 26 #13, 38-41 <i>Chapter Investigation 13</i> #51 ATE: ETL 35, 39	SE: 11-13, 17 Example 3, 19 #29-#30, 20 #5, Example 1 ATE: I 20 LW 12	SE: 82-85, 86-89, 153 #25-#26, 406-409, 412-415, 457 #21-#26 ATE: FG 408
PO 11. Evaluate the reasonableness of conclusions drawn from data analysis.	SE: 10-13, 19 #41, 27 #29-#35, 28-31, 34-37, 65 #43-#44, 83 #44-#46, 87 #58-#60 It was not a specified activity in the book, but the previous pages were areas where it could best fit in.	SE: 22 #6, 23 #15, 37 #17 ATE: EL 21, 27	These pages help tie in to the objective. SE: 406-409, 412-415
PO 12. Recognize and explain the impact of interpreting data (making inferences or drawing conclusions) from a biased sample.	SE: 6-9	SE: 7, 9 #22-#24, 23 #16, 34-37 ATE: AA 34 CE 35 LW 36	SE: Although not a biased sample, pages 92-93 could be used to meet this objective.
PO 13. Draw a line of best fit for a scatter plot.	SE: 34-37, 340 Ex 3, 341 #25-#31	SE: 20, 21 Example 3, 22 Example 4, #6, 23 #10 ATE: CE 21	SE: 406-409 ATE: AA 409 FG 408
PO 14. Determine whether a displayed data has positive, negative, or no correlation.	SE: 34-37, 341 #28 & #31, 83 #45-#46, 87 #59	SE: 20-23, 27 #1-#3, #7-#10 <i>Mid-Chapter Quiz</i> 25 #9-#10 <i>Review and Practice Your Skills</i> 24 #12-#18 ATE: CE 21, 24, 27 EL 27	SE: 406-409

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 15. Identify a normal distribution.	See <i>MathMatters 2</i> © 2006.	Introductory material to the concept of normal distribution can be found in the following examples. SE: 10-13, 16-19, 28-31	SE: 415 #21-#24
PO 16. Identify differences between sampling and census.	SE: 6-9	While the term census is not used, the difference between sampling and census is taught in the following example. SE: 6-9	SE: 82-85
PO 17. Identify differences between biased and unbiased samples.	SE: 6-9	SE: 7, 9 #22-#24, 23 #16, 34-37 ATE: AA 34 CE 35 LW 36	See <i>MathMatters 2</i> © 2006.
Concept 2: Probability			
Understand and apply the basic concepts of probability.			
PO 1. Find the probability that a specific event will occur, with or without replacement.	SE: 436-439, 456-459 ATE: ETL 439	SE: 153 #23, 162-165 <i>MathWorks</i> 177 #3-#5 <i>Review and Practice Your Skills</i> 166 #14-#23, 176 #1-#18 ATE: CE 163 EL 163	SE: 384-387, 388-389, 392-395, 396-399, 439 #19-#24, 443 #13-#16, 495 #43-#48, 617 #40-#43
PO 2. Determine simple probabilities related to geometric figures.	SE: 436-439, 467 #19 ATE: ETL 458	SE: 152 Example 3, #5-#8, 153 #16-#19, #22 <i>Review and Practice Your Skills</i> 156 #1-#4, 157 #15-#22, 167 #24-#26 ATE: AA 153 CE 151	SE: 212-215, 261 #23-#25, 327 #12-#14, 495 #43-#48 ATE: AA 213 ETL 215 FG 214 TT 212
PO 3. Predict the outcome of a grade-level appropriate probability experiment.	SE: 440-443, 446-449 ATE: AA 442 FG 440	SE: 150-151 <i>Chapter Investigation</i> 147, 184	SE: 384-387, 388-389, 396 <i>Are You Ready?</i> 201 ATE: ETL 386 FG 385

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 4. Record the data from performing a grade-level appropriate probability experiment.	SE: 440-443 ATE: AA 442 FG 440	SE: 150 #1, 154 Problem, 155 #4-#8 <i>Chapter Investigation 147</i>	SE: 396 <i>Chapter Investigation 381, 386 #9, 395 #30</i> ATE: ETL 387 FG 391
PO 5. Compare the outcome of an experiment to predictions made prior to performing the experiment.	SE: 440-443 ATE: AA 442 FG 440	SE: 151 Example 2 <i>Chapter Investigation 147, 171, 184</i>	SE: 396 <i>Chapter Investigation 381, 386 #9</i> ATE: FG 391 TT 389
PO 6. Distinguish between independent and dependent events.	SE: 456-459, 460-461 ATE: ETL 458	SE: 168-171 <i>Chapter Review 184 #24-#27</i> <i>Review and Practice Your Skills 176 #1-#18</i> ATE: CE 169 LW 170 TT 170	SE: 396-399 ATE: DI 397 ETL 399 FG 398 TT 396
PO 7. Compare the results of two repetitions of the same grade-level appropriate probability experiment.	SE: 440-443 ATE: AA 442 FG 440	SE: 150 #2 <i>Chapter Investigation 147, 171, 184</i>	SE: 396 Chapter 9 would be an appropriate place to apply this objective to problems.
Concept 3: Discrete Mathematics – Systematic Listing and Counting			
Understand and demonstrate the systematic listing and counting of possible outcomes.			
PO 1. Determine the number of possible outcomes for a contextual event using a chart, a tree diagram, or the counting principle.	SE: 446-449, 450-453 ATE: DI 450 TT 446, 451	SE: 158-161 <i>MathWorks 177 #2</i> ATE: CE 159 EL 169 I 172 TT 158, 178	SE: 384-387 ATE: TT 404
PO 2. Determine when to use combinations versus permutations in counting objects.	The following pages could be used to help meet this objective. SE: 449 #34-#39	SE: 172-175, 178-181 ATE: CE 173, 179 EL 179, 180, 181 LW 174, 180	SE: 402-405 ATE: AA 405 ETL 403 TT 404

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 3. Use combinations or permutations to solve contextual problems.	See <i>MathMatters 2</i> © 2006.	SE: 173 Example 3, 174 #6, #13-#14, #19, #20, 175 #25 <i>MathWorks</i> 177 #1 <i>Review and Practice Your Skills</i> 176 #29-#31	SE: 402-405 ATE: AA 405 ETL 403 TT 404
Concept 4: Vertex-Edge Graphs			
Understand and apply vertex-edge graphs.			
Strand 3: Patterns, Algebra, and Functions			
Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.			
Concept 1: Patterns			
Identify patterns and apply pattern recognition to reason mathematically.			
PO 1. Communicate a grade-level appropriate iterative or recursive pattern, using symbols or numbers.	SE: 128-129, 314-317	SE: 69 #44, 92-93, 542-543 <i>Are You Ready?</i> 243 #39-#48 ATE: 5MW 92 AA 59 S 92, 274	SE: 52-55, 117 #40-#45, 124-127
PO 2. Find the n^{th} term of an iterative or recursive pattern.	SE: 128-129 ATE: FG 315	Finding the n^{th} term of an iterative or recursive pattern is not explicitly taught, but the following examples introduce this skill. SE: 69 #44, 254-257, 258-261, 274-275, 279 #20 ATE: AA 59 CE 275 LW 275	SE: 52-55, 117 #40-#45, 124-127
PO 3. Evaluate problems using basic recursion formulas.	See <i>MathMatters 2</i> © 2006.	SE: 42 #1-#6, 93 #12-#15 <i>Are You Ready?</i> 243 #39-#48 ATE: AA 59	See <i>MathMatters 2</i> © 2006.

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
Concept 2: Functions and Relationships			
Describe and model functions and their relationships.			
PO 1. Determine if a relationship is a function, given a graph, table, or set of ordered pairs.	SE: 314-317, 322 #4-#7, 322 #18-#27, 341 #34, 355 #42, 377 #41	SE: 264 Example 1, 265 Example 2, 266, 267 #26, 269, 275 ATE: CE 265, 275 LW 275	SE: 56-59, 62-65, 121 #21-#22, 185 #30-#32, 520, 600-603 <i>Are You Ready?</i> 518-519 ATE: ETL 58
PO 2. Describe a contextual situation that is depicted by a given graph.	SE: 306-307, 312 #1-#10, 313 #41-#44, 323 #52-#54	SE: 245 Example 3, 251 #36-#40, 337 #39, 344 #1-#3, 358-359	See <i>MathMatters 2</i> © 2006.
PO 3. Identify a graph that models a given real-world situation.	SE: 306-307, 312 #1-#10, 313 #41-#44, 321 #31-#37, 327 #41, 331 #31-#32	SE: 245 Example 3, 251 #36-#44, 267 #25, 358-359 <i>MathWorks</i> 253, 323	SE: 259-260 Students make graphs on pages 247 #38-#41.
PO 4. Sketch a graph that models a given contextual situation.	SE: 306-307, 311 #45-#48	SE: 246 #18, 261 #44-#45, 264 Example 1, 269 Example 2, 270 #28, 363 Example 3, 364 #24, 365 #28	See <i>MathMatters 2</i> © 2006.
PO 5. Determine domain and range for a function.	SE: 314-317, 322 #8-#17, 341 #32-#33, 355 #40-#42	SE: 264, 266 #6, 267 #26, 269 #1-#3, 270 #13-#18, 275 #7 <i>Review and Practice Your Skills</i> 272 #1-#4, #14-#19	SE: 56-59, 63 Ex 2, 65 #24, 259-260, 624-627
PO 6. Determine the solution to a contextual maximum/minimum problem, given the graphical representation.	This objective could be introduced by the teacher with pages 338-341.	SE: 269 Example 2, 270 #29 <i>MathWorks</i> 273, 403 #2 ATE: CE 269 L 272 LW 270	SE: 282-285, 522 #6, 527 #21-#23
PO 7. Express the relationship between two variables using tables/matrices, equations, or graphs.	SE: 314-317, 318-321, 324-327 ATE: ETL 307 FG 315	SE: 258-261, 276-279, 282-285, 354-357 ATE: CE 259, 277, 355 EL 355 L 272 LW 356	SE: 62-65, 76-79, 89 #21-#26, 244-247, 258-261, 276-279, 282-285, 520-523, 524-527, 562-565

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 8. Interpret the relationship between data suggested by tables/matrices, equations, or graphs.	SE: 314-317, 318-321, 324-327, 338-341 ATE: AA 317 ETL 307 FG 315	SE: 41 #13-#20, 257 #35-#37, 261 #44-#45, 269 Example 2, 270 #19-#23, 276-279, 282-285 <i>MathWorks</i> 273 ATE: AA 279 EL 277, 284	SE: 406-409, 580-583, 584-587 ATE: AA 584 ETL 580
PO 9. Determine from two linear equations whether the lines are parallel, perpendicular, coincident, or intersecting but not perpendicular.	SE: 331 #33-#37	SE: 334-337, 351 #32 <i>Chapter Review</i> 366 #11-#13 <i>Review and Practice Your Skills</i> 342 #1-#18, 353 #34-#36 ATE: CE 335, 342 EL 336 LW 336 TT 334	SE: 248-251, 256 #13, 258-261, 264-267, 268-271, 274-275 ATE: DI 249 ETL 250, 251, 271
Concept 3: Algebraic Representations			
Represent and analyze mathematical situations and structures using algebraic representations.			
PO 1. Evaluate algebraic expressions, including absolute value and square roots.	SE: 104-107, 108-113, 114-117, 124-127, 132-135, 142-145, 232-235, 327 #46-53 ATE: ETL 241	SE: 57 Example 3, 58 #7-#10, #22-#25, 59 #35-#42, 67 Example 3, 68 #36-#43, 82 Example 1, 84 #1-#4, #14-#21, 87 Example 2 <i>Review and Practice Your Skills</i> 60 #31-#48 ATE: AA 84 CE 57	SE: 10-13, 20-23, 26-29, 34-37, 41 #46-#57, 69 #54-#56, 426-429, 436-439 <i>Are You Ready?</i> 425 ATE: TT 427

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 2. Simplify algebraic expressions.	SE: 104-107, 108-113, 114-117, 124-127, 132-135, 136-139, 142-145, 228-231, 232-235 ATE: ETL 241	SE: 66 Example 1, 67 Example 2, 68 #15-#35, 69 #48-#50, 72-75, 76-79 <i>Mid-Chapter Quiz</i> 71 #5-#10 <i>Review and Practice Your Skills</i> 70 #29-#52 ATE: CE 67 LW 68 TT 76	SE: 10-13, 34-37, 38-41, 426-429, 430-433, 436-439, 468-471 ATE: ETL 36, 37, 41
PO 3. Multiply and divide monomial expressions with integral exponents.	SE: 404-407, 408-411, 418-421, 424-425 ATE: ETL 406, 407, 411, 420, 421	SE: 380-383, 386-389 <i>Review and Practice Your Skills</i> 384 #23-#50 ATE: AA 389 CE 381, 387 DI 381 EL 382 LW 382, 388	SE: 34-37, 38-41, 472-475, 478-481, 482-485 ATE: ETL 36, 37, 41 FG 35
PO 4. Translate a written expression or sentence into a mathematical expression or sentence.	SE: 107 #47-#48, 111 #51-#54, 117 #61-#63, 121 #47, 124-127, 135 #69, 159 #51, 215 #68 ATE: ETL 125 PE 126	SE: 62-65 <i>Review and Practice Your Skills</i> 70 #1-#12 ATE: CE 63 LW 64 PE 62 TT 63, 70	SE: 9 #41-#44, 13 #27-#29, 20-23, 26-29, 30-31, 68 #10-#13 ATE: ETL 29
PO 5. Translate a sentence written in context into an algebraic equation involving multiple operations.	SE: 211 #53-#54, 213 Ex 3, 215 #44-#53, 219 Ex 4, 220 #14, 222-225, 228-231, 232-235, 246-249	SE: 63 Example 3, 64 #6, #19, #22-#24, #26, #28-#29	SE: 72-75, 79 #25-#26, 82-85, 111 #22-#25, 178-181, 202-205, 206-209, 227 #16 <i>MathWorks</i> 81
PO 6. Write a linear equation for a table of values.	SE: 318-321, 439 #57 ATE: TT 319	SE: 264 Example 1, 265 Example 2 ATE: CE 265	SE: 254-257 (from 2 points, not tables)

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	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 7. Write a linear algebraic sentence that represents a data set that models a contextual situation.	SE: 327 #37-#38, 330 #7-#11, 341 #29-#31	SE: 65 #54-#57, 261 #37, 275 #20, 340 #7-#8, 365 #27 <i>MathWorks</i> 273 #3	SE: 69 #38, 74 #9, 79 #25-#26, 256 #14 & #25, 261 #13-#15, 266 #12-#15, 270 #17, 282-285, 299 #28-#30, 406-409
PO 8. Solve linear (first degree) equations in one variable (may include absolute value).	SE: 212-215, 218-221, 222-225, 228-231, 232-235, 260-263, 264-267, 270-273, 274-277, 280-283	SE: 114-115, 116-119 <i>Review and Practice Your Skills</i> 262 #1-#6 ATE: 5MW 132 CE 117, 255 L 120	SE: 66-69, 72-75, 107 #29-34, 114-117, 139 #13-#14, 150-151, 178-181, 206-209, 230-233
PO 9. Solve linear inequalities in one variable.	SE: 246-249, 263 #51-#55	SE: 132-135 <i>Chapter Review</i> 142 #42-#47 <i>Review and Practice Your Skills</i> 130 #1-#21, 262 #34-#39 ATE: CE 133, 259	SE: 76-79, 172-175, 271 #37-#44, 439 #25-#28 <i>Are You Ready?</i> 243
PO 10. Write an equation of the line given: two points on the line, the slope and a point on the line, or the graph of the line.	SE: 328-331, 439 #57 <i>Standardized Test Practice</i> 346 #10	SE: 255 Example 3, 256 Example 4, 257 #16-#33 <i>Review and Practice Your Skills</i> 263 #53-#55 ATE: CE 255, 259 LW 256	SE: 254-257, 313 #15-#23 This objective also could be integrated into pages 406-409.
PO 11. Solve an algebraic proportion.	SE: 260-263, 270-273, 274-277, 284-287, 290-293, 294-295	SE: 122-125, 276 #4 <i>Review and Practice Your Skills</i> 130 #1-#21, 131 #45-#47 ATE: CE 123 TT 124	SE: 296-299, 300-303, 306-309, 316-319, 320-323, 584-587, 618-621 ATE: ETL 299, 319, 322 FG 298

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 12. Solve systems of linear equations in two variables (integral coefficients and rational solutions).	See <i>MathMatters 2</i> © 2006.	SE: 344-347, 348-351 ATE: 5MW 348 CE 345, 349 EL 350 FG 351 LW 346, 350 TT 349	SE: 258-261, 264-267, 268-271, 274-275, 282-285 ATE: ETL 259
PO 13. Add, subtract and perform scalar multiplication with matrices.	See <i>MathMatters 2</i> © 2006.	SE: 354-357 <i>Chapter Review 367 #27-#29</i> <i>Review and Practice Your Skills 360 #1-#8</i> ATE: AA 356 CE 355 EL 355 LW 356 TT 354	SE: 358-361, 362-365, 368-371, 405 #23-#24, 409 #16-#18, 415 #25-#27 ATE: AA 365
PO 14. Calculate powers and roots of real numbers, both rational and irrational, using technology when appropriate.	SE: 114-117, 132-135, 136-139, 142-145, 334-337 ATE: TT 142	SE: 82-85, 86-89, 136-139 ATE: AA 84, 88 CE 83 I 82 LW 84 PE 83 TT 82, 86	SE: 34-37, 38-41, 425-429, 430-433, 436-439, 448-451, 471 #40-#43, 520-523 ATE: ETL 37, 429
PO 15. Simplify square roots and cube roots with monomial radicands (including those with variables) that are perfect squares or perfect cubes.	This objective could be introduced by the teacher with pages 142-145.	SE: 136 Example 1, 137 Example 2, Example 3, 138 #1-#2, #15, #17-#19, 139 #15 ATE: 5MW 504 CE 137 DI 136 I 136 LW 138	SE: 426-429, 430-433, 436-439, 448-451, 471 #44-#51, 509 #45-#56, 537 #59-#67, 540-543, 544-547 ATE: ETL 429

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 16. Solve square root radical equations involving only one radical.	See <i>MathMatters 2</i> © 2006.	SE: 136-139 <i>Chapter Review 142 #48-#55</i> ATE: 5MW 504 CE 136 DI 136 EL 138 I 136 LW 138	See <i>MathMatters 2</i> © 2006.
PO 17. Solve quadratic equations.	See <i>MathMatters 2</i> © 2006.	SE: 268-271 <i>MathWorks 273</i> <i>Review and Practice Your Skills 272 #14-#27</i> ATE: CE 269 LW 270	SE: 530-533, 534-537, 540-543 ATE: AA 534 ETL 542
PO 18. Identify the sine, cosine, and tangent ratios of the acute angles of a right triangle.	See <i>MathMatters 2</i> © 2006.	SE: 488-491, 495 <i>Mid-Chapter Quiz 493 #9-#14</i> <i>Review and Practice Your Skills 492 #8-#28</i> ATE: CE 489 EL 488, 496 L 493 LW 490 TT 490, 494	SE: 614-617, 618-621 Two interesting extensions to this objective are found on pages 624-627 and 628-631. ATE: ETL 618 FG 617

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
Concept 4: Analysis of Change			
Analyze change in a variable over time and in various contexts. (Grades K-8)			
PO 1. Determine slope, x-, and y-intercepts of a linear equation.	SE: 318-321, 324-327, 359 #32-#35, 377 #39-#40, 439 #57	SE: 254-255 Example 1, Example 3, 256 #7, #11-#14, 257 #36, #38-#39 <i>Review and Practice Your Skills</i> 262 #1-#6, 263 #56-#58 ATE: CE 255 LW 256	SE: 244-247, 248-251, 258-261, 276-279, 303 #19-#27, 319 #14-#16
PO 2. Solve formulas for specified variables.	SE: 232-235, 321 #44-#45	SE: 105, 106 Example 3, #7-#8, 107 #25-#31, #36-#38 ATE: CE 105 EL 107	SE: 244-247, 248-251, 258-261, 264-267, 276-279
Strand 4: Geometry and Measurement			
Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.			
Concept 1: Geometric Properties			
Analyze the attributes and properties of 2- and 3-dimensional shapes and develop mathematical arguments about their relationships.			
PO 1. Identify the attributes of special triangles. (isosceles, equilateral, right)	SE: 160-163	SE: 206-209, 498-501, 504-507 <i>Are You Ready?</i> 190 ATE: CE 190, 207, 505 EL 206 LW 208 RW 191	SE: 150-153, 160-163, 215 #29-#32, 614-617, 618-621 ATE: ETL 160
PO 2. Identify the hierarchy of quadrilaterals.	SE: 51, 154 ATE: DI 51	SE: 216, 218 #22-#29, 219 #46 ATE: EL 223 I 216 LW 218 TT 217, 220	SE: 182-185, 188-191

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 3. Make a net to represent a 3-dimensional object.	SE: 166-169, 170-172 ATE: DI 173	SE: 426-429 <i>Review and Practice Your Skills</i> 430 #10-#15 ATE: AA 426 CE 427 I 426 LW 428	This skill can be reinforced using: SE: 220-223, 224-227
PO 4. Make a 3-dimensional model from a net.	SE: 177 #11 ATE: DI 173 ETL 366	SE: 426-429 <i>Review and Practice Your Skills</i> 430 #10-#15 ATE: AA 426 CE 427 I 426 LW 428	This skill can be reinforced using: SE: 220-223, 224-227
PO 5. Draw 2-dimensional and 3-dimensional figures with appropriate labels.	SE: 171 #8, 174-177, 178-187, 356-359 The following references also could be used to meet this objective. SE: 66-69, 80-83, 84-87, 160-163, 166-169, 184-187, 188-191	SE: 436-439, 442-445, 446-449 ATE: CE 437, 443 EL 436, 443 FG 446 LW 438, 444	SE: 104-107, 118-121, 221 Ex 3 These pages can help tie in to this objective. SE: 206-209, 212-215, 216-217, 224-227, 230-233
PO 6. Solve problems related to complementary, supplementary, or congruent angle concepts.	SE: 160-163, 215 #44, 352-355, 362-365, 443 #37-#38, 467 #28 ATE: DI 353 TT 352	SE: 196-199, 203 <i>Review and Practice Your Skills</i> 201 #35-#38 ATE: AA 197 CE 197 DI 204 LW 198 TT 196	SE: 108-111, 114-117, 118-121, 128-131, 131-137, 150-153, 154-157, 164-167, 172-175

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 7. Solve problems by applying the relationship between circles, angles, and intercepted arcs.	See <i>MathMatters 2</i> © 2006.	SE: 226-229 <i>Review and Practice Your Skills 230 #13-#25</i> <i>Standardized Test Practice 371 #15, 417 #19-#21</i> ATE: CE 227, 233 EL 226, 228 L 231	SE: 440-443, 446-447, 491 #43-#48 ATE: AA 441 FG 444
PO 8. Solve problems by applying the relationship between radii, diameters, chords, tangents or secants.	The following pages could be used to meet this objective. SE: 80-83, 93 #29, 121 #54-#56	SE: 226-229 ATE: CE 227, 233 EL 228 LW 228	SE: 448-451
PO 9. Solve problems using the triangle inequality property.	ATE: ETL 160	See <i>MathMatters 3</i> © 2006.	SE: 172-175, 299 #49-#56
PO 10. Solve problems using special case right triangles.	See <i>MathMatters 2</i> © 2006.	SE: 504-507 <i>Chapter Review 512 #40-#45</i> ATE: DI 504, 505 LW 506	SE: 436-439, 481 #42-#44
PO 11. Determine when triangles are congruent by applying SSS, ASA, AAS or SAS.	See <i>MathMatters 2</i> © 2006.	SE: 212-215 ATE: CE 213 DI 212 EL 214 LW 215 TT 213	SE: 154-157, 160-163, 167 #23 <i>Are You Ready?</i> 148-149 ATE: ETL 160
PO 12. Determine when triangles are similar by applying SAS, SSS, or AA similarity postulates.	See <i>MathMatters 3</i> © 2006.	See <i>MathMatters 3</i> © 2006.	SE: 310-313, 316-319, 355 #21-#24 ATE: AA 313 FG 310

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 13. Construct a triangle congruent to a given triangle.	The following pages could be use to help meet this objective. SE: 256-259	Students should be able to achieve this objective when help from the following examples. SE: 212-215 ATE: 5MW 212 CE 213 DI 212 EL 214 LW 214 TT 213	This objective can be met by tying in the following pages. SE: 154-157, 160-163
PO 14. Solve contextual situations using angle and side length relationships.	The following pages could be use to help meet this objective. SE: 160-163	SE: 209 #32-#33, 214 #19 <i>MathWorks</i> 221	SE: 172-175, 300-303, 306-309, 310-313, 316-319 <i>MathWorks</i> 159, 177, 305
Concept 2: Transformation of Shapes			
Apply spatial reasoning to create transformations and use symmetry to analyze mathematical situations.			
PO 1. Sketch the planar figure that is the result of two or more transformations.	SE: 370-373, 374-377, 380-383 <i>MathWorks</i> 379	SE: 298 #3, #13-#14, 301 Example 3, 309 #20 ATE: CE 301 EL 301	SE: 338-341, 352-355 ATE: ETL 354 FG 355
PO 2. Identify the properties of the planar figure that is the result of two or more transformations.	SE: 370-373, 374-377, 380-383 <i>MathWorks</i> 379 ATE: TT 371, 375, 380, 381	SE: 298 #1-#5, #19, 319 #22-#24 ATE: CE 297 LW 318	SE: 352-355
PO 3. Determine the new coordinates of a point when a single transformation is performed on a planar geometric figure.	SE: 370-373, 374-377, 380-383	SE: 296-297, 298, 300, 302 ATE: CE 297, 298 LW 302, 308	SE: 338-341, 342-345, 348-351, 368-371
PO 4. Determine whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation.	SE: 370-373, 374-377, 380-383	SE: 296-299, 300-303, 306-309, 316-319 ATE: CE 297, 301, 307, 317	SE: 338-341, 342-345, 348-351

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 5. Classify transformations based on whether they produce congruent or similar figures.	See <i>MathMatters 2</i> © 2006.	SE: 296-299, 300-303, 306-309, 316-319 ATE: CE 297, 301, 307, 317	SE: 338-341, 342-345, 348-351
PO 6. Determine the effects of a single transformation on linear or area measurements of a planar geometric figure.	ATE: TT 370	SE: 319 #21, #27-#28 ATE: LW 298, 302, 308, 318	SE: 227 #19, 351 #16-#17 ATE: ETL 217 FG 231
Concept 3: Coordinate Geometry			
Specify and describe spatial relationships using coordinate geometry and other representational systems.			
PO 1. Graph a quadratic equation with lead coefficient equal to one.	Nonlinear graphs appear on: SE: 338-341	SE: 268 #2, #5, #6, 269 Example 1, 270 #13-#18, #31, 271 #34, #37 <i>Review and Practice Your Skills</i> 272 #15-#16, #18, #19 ATE: CE 269 LW 270	SE: 520-523, 566-569
PO 2. Graph a linear equation in two variables.	SE: 318-321, 328-331, 337 #46-#48, 359 #32-#35, 377 #38 <i>MathWorks</i> 332 ATE: ETL 329	SE: 256 Example 4, #11-#14, 265 Example 2 <i>Review and Practice Your Skills</i> 263 #56-#58 ATE: CE 255 EL 255	SE: 62-65, 89 #21-#26, 107 #21-#28, 244-247, 248-251, 258-261, 282-285, 319 #14-#16, 365 #40-#45
PO 3. Graph a linear inequality in two variables.	Linear inequality graphs involving two variables appear on: SE: 338-341	SE: 259 Example 2, 260 Example 3, #22-#30, 261 #31-#33 <i>Review and Practice Your Skills</i> 263 #59-#61 ATE: CE 259	SE: 76-79, 276-279

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 4. Determine the solution to a system of equations in two variables from a given graph.	See <i>MathMatters 2</i> © 2006.	SE: 338-341 <i>Review and Practice Your Skills 342 #25-#33</i> ATE: CE 339 I 338 L 342	SE: 258-261, 276-279, 282-285, 590-593
PO 5. Determine the midpoint between two points in a coordinate system.	See <i>MathMatters 2</i> © 2006.	SE: 245 Example 3, 246 #5-#6, #9, 247 #36 <i>Review and Practice Your Skills 252 #7-#12</i> ATE: CE 245	SE: 544-547, 593 #27-#38 <i>Are You Ready?</i> 337 ATE: FG 547
PO 6. Determine changes in the graph of a linear function when constants and coefficients in its equation are varied.	This objective could be met when the teacher uses it as a discovery lesson with Chapter 7.	SE: 254 #1-#4 ATE: I 254	The following lessons could be used to help meet this objective. SE: <i>Lesson 6-1, 6-2</i>
PO 7. Determine the distance between two points in the coordinate system.	SE: 334-337, 367 #14-#17 ATE: ETL 335, 336	SE: 244 Example 1, 245 Example 2, 246 #3-#4, #10- #13, 247 #19-#27 <i>MathWorks 253</i> <i>Review and Practice Your Skills 252 #1-#6</i> ATE: CE 245 I 252	SE: 544-547
Concept 4: Measurement - Units of Measure - Geometric Objects			
Understand and apply appropriate units of measure, measurement techniques, and formulas to determine measurements.			
PO 1. Calculate the area of geometric shapes composed of two or more geometric figures.	SE: 83 #38-#40, 90-93, 194- 197, 235 #45-#46, 411 #63- #65, 417 #60-#61 ATE: AA 195 DI 68 FG 90	SE: 427 Example 3 ATE: CE 427 DI 432 I 426	SE: 206-209, 212-215, 216-217, 251 #31-#33, 261 #23-#25, 327 #12-#14 <i>MathWorks 453</i> ATE: ETL 215 FG 214

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 2. Calculate the volumes of 3-dimensional geometric figures.	SE: 184-187, 188-191, 239 #10-#11, 277 #49-#51, 407 #63-#66 ATE: AA 185 ETL 184, 189	SE: 452-455, 456-459 <i>Are You Ready?</i> 421 #13-#15 <i>Standardized Test Practice</i> 468 #11 ATE: CE 420, 453 EL 458 LW 454	SE: 230-233, 267 #26 ATE: ETL 233
PO 3. Calculate the surface areas of 3-dimensional geometric figures.	SE: 194-197, 225 #58-#62, 277 #49-#51, 417 #58-#59 ATE: AA 195	SE: 426-429, 432-435 ATE: CE 427, 433, 443 FG 435 LW 458	SE: 224-227, 257 #26-#28
PO 4. Compare perimeter, area, or volume of figures when dimensions are changed.	SE: 69 #41 ATE: ETL 189	SE: 229 #30, 411 #64, 432 #1-#4, 462 Problem b	SE: 208 #11 & #18, 227 #19, 351 #16-#17 ATE: ETL 208, 217
PO 5. Find the length of a circular arc.	See <i>MathMatters 2</i> © 2006.	SE: 227 Example 3, 228 #11-#14, #17-#18, 229 #29 <i>Review and Practice Your Skills</i> 230 #21-#23	These page references can be used to tie in to the objective. SE: 208 #4, 211 #43, 219 #20-#21
PO 6. Find the area of a sector of a circle.	See <i>MathMatters 2</i> © 2006.	The area of a sector is not in this book, but it is covered in the <i>Enrichment Worksheet</i> 10-3.	See <i>MathMatters 2</i> © 2006.
PO 7. Solve for missing measures in a pyramid. (i.e., slant height, height)	SE: 191 #25-#27, 191 #33, #35	SE: 453 Example 3	SE: 224-227, 230-233
PO 8. Find the sum of the interior and exterior angles of a polygon.	See <i>MathMatters 2</i> © 2006.	SE: 223-224, 225 #34-#35, #37 <i>Review and Practice Your Skills</i> 230 #5-#8 ATE: CE 223 I 222 LW 224	SE: 178-181, 217 #8-#15

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 9. Solve scale factor problems using ratios and proportions.	SE: 74-77, 84-87, 171 #8	SE: 317 Example 3, 318 #13-#16, 319 #26-#28 <i>Chapter Review</i> 326 #29-#31 <i>Review and Practice Your Skills</i> 323 #20 ATE: CE 317, 322	SE: 296-299, 300-303, 306-309, 310-313, 316-319, 320-323, 326-327 ATE: ETL 303, 309
PO 10. Solve applied problems using similar triangles.	See <i>MathMatters 2</i> © 2006.	SE: 477 #23, 478-481 <i>MathWorks</i> 483 ATE: CE 479 EL 480, 481	SE: 310-313, 323 #14, 326-327 ATE: ETL 314
Strand 5: Structure and Logic			
Every student should understand and use all concepts and skills from the previous grade levels. The standards are designed so that new learning builds on preceding skills and are needed to learn new skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of mathematical strands.			
Concept 1: Algorithms and Algorithmic Thinking			
Use reasoning to solve mathematical problems in contextual situations.			
PO 1. Determine whether a given procedure for simplifying an expression is valid.	SE: 107 #46, 111 #61, 135 #57, 139 #62	SE: 57 Example 2, 58 #26, 75 #59, 79 #46 <i>Think Back</i> 76 ATE: TT 76	SE: 69 #24, 340 #10, 470 #14, 475 #42
PO 2. Determine whether a given procedure for solving an equation is valid.	SE: 211 #51 & #62, 214 #10, 215 #17 & #60, 221 #52, 224 #13, 225 #44 & #46, 231 #63-#65, 250 #15, 273 #42	SE: 56, 57 Example 3, 75 #64, 105, 108, 264-267 ATE: TT 76, 105	SE: 74 #8 ATE: DI 67, 69 ETL 73
PO 3. Determine whether a given procedure for solving a linear inequality is valid.	SE: 248 #9, 249 #37	SE: 126-129, 132-133, 135 #49, 258-261 ATE: CE 127, 259 LW 128 TT 126, 127	See <i>MathMatters 2</i> © 2006.
PO 4. Select an algorithm that explains a particular mathematical process.	SE: 224 #13, 228 Ex 1, 482-485, 506-509 <i>Building Understanding</i> 222	SE: 58 #26, 83, 136, 150, 159, 165 #29-#30 ATE: DI 136	SE: 22 #11, 31 #5, 41 #33, 75 #37, 85 #16, 227 #16

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 5. Determine the purpose of a simple mathematical algorithm.	SE: 118-121, 212-213, 224 #13, 228 Ex 1	SE: 74 #54, 105-106 Example 3, #8-#9, 107 #36-#38, 111 #47, 172-173 <i>Think Back</i> 66 ATE: TT 105	SE: 66 Ex 1, 69 #24, 72 Ex 1, 75 #37 ATE: DI 67 ETL 75
PO 6. Determine whether given simple mathematical algorithms are equivalent.	SE: 212-213, 231 #65	SE: 65 #60, 75 #64, 257 #39	SE: 66 Ex 1, 72 Ex 1 ATE: DI 67 ETL 75
Concept 2: Logic, Reasoning, Arguments, and Mathematical Proof			
Evaluate situations, select problem-solving strategies, draw logical conclusions, develop and describe solutions and recognize their applications.			
PO 1. Draw a simple valid conclusion from a given <i>if...then</i> statement and a minor premise.	SE: 488-491 ATE: ETL 489, 491	SE: 532 #1-#2, 539 Example 2, 540 #5-#6, #13-#15, 542-545 <i>MathWorks</i> 547 #2 ATE: CE 539, 543 EL 545 TT 539	SE: 128-129
PO 2. List related <i>if... then</i> statements in logical order.	SE: 488-491 ATE: ETL 489, 491	SE: 542, 549 #1-#12 ATE: EL 545	SE: 134-137
PO 3. Write an appropriate conjecture given a certain set of circumstances.	SE: 482-485 ATE: ETL 484	SE: 538-541, 542-543, 545 #24 <i>Review and Practice Your Skills</i> 546 #4-#7 ATE: CE 539 TT 539	SE: 124-127 ATE: ETL 127 FG 124, 125
PO 4. Analyze assertions related to a contextual situation by using principles of logic.	SE: 482-485, 488-491, 498-501, 502-503 ATE: ETL 484, 489, 491, 499, 503	SE: 85 #52-#53, 525 Example 3, 541 #19-#22, 544 #11, 545 #19-#22, 550 #13 <i>Are You Ready?</i> 519 #11-#14 <i>MathWorks</i> 529, 547 ATE: CE 543	SE: 124-127, 128-131 ATE: ETL 127 FG 124, 125

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 5. Identify a valid conjecture using inductive reasoning.	SE: 482-485	SE: 539 Example 3, 540 #7, #16-#17, 541 #19-#22, #26, 542-543, 545 #24 ATE: CE 239, 546 EL 541	SE: 124-127 ATE: ETL 127 FG 124, 125
PO 6. Distinguish valid arguments from invalid arguments.	SE: 488-491 <i>MathWorks</i> 487	SE: 532 #2, 533, 534 #5-#8, #13-#16, 543-544 ATE: CE 543 EL 545 TT 542 LW 544	SE: 128-131
PO 7. Create inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.	SE: 482-485, 488-491, 498-501, 502-503 ATE: ETL 484, 489, 491, 499, 503	SE: 548-551 <i>Chapter Review</i> 554 #50-#51 ATE: CE 539, 549 LW 550	SE: 124-127, 128-131, 134-137, 150-153, 154-157, 160-163, 164-167, 170-171, 172-175, 430-433
PO 8. Critique inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship.	SE: 482-485, 488-491, 498-501, 502-503 ATE: ETL 484, 489, 491, 499, 503	SE: 548-551 <i>Chapter Review</i> 554 #50-#51 <i>Check Understanding</i> 549 ATE: CE 539 LW 550	SE: 124-127, 128-131, 134-137, 150-153, 154-157, 160-163, 164-167, 170-171, 172-175, 430-433
PO 9. Identify a counterexample for a given conjecture.	SE: 482-485, 488-491, 502-503 ATE: ETL 484	SE: 531 #1-#3, #6-#8, 534 #5-#8, #13-#16, 541 #26, 551 #21 <i>Mid-Chapter Quiz</i> 537 #17, #20 <i>Review and Practice Your Skills</i> 536 #18-#20 ATE: CE 531	SE: 128-131, 157 #12

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 10. Construct a counterexample to show that a given conjecture is false.	SE: 482-485, 488-491, 502-503 ATE: ETL 484	SE: 531 #1-#3, #6-#8, 534 #5-#8, #13-#16, 541 #26, 551 #21 <i>Mid-Chapter Quiz</i> 537 #17, #20 <i>Review and Practice Your Skills</i> 536 #18-#20 ATE: CE 531	SE: 128-131, 157 #12
PO 11. State the inverse, converse, or contrapositive of a given statement.	See <i>MathMatters 2</i> © 2006.	SE: 530 Problem b, 531 #1-#3, #6-#8, 533, 534 #5-#8, #13-#16, #20-#21, 535 #26-#28, #33-#35 ATE: 5MW 538, 542 CE 536 I 542	SE: 128-131, 430-433
PO 12. Determine if the inverse, converse, or contrapositive of a given statement is true or false.	See <i>MathMatters 2</i> © 2006.	SE: 530 Problem c, 531 #1-#3, #6-#8, 533, 534 #5-#8, #13-#16, #20-#21, 535 #26-#28 ATE: 5MW 538, 542 CE 536 I 542	SE: 128-131, 430-433
PO 13. Construct a simple formal or informal deductive proof.	See <i>MathMatters 2</i> © 2006.	SE: 539-541, 542-545 <i>Review and Practice Your Skills</i> 546 #4-#12 ATE: CE 539, 543 EL 545 TT 539	SE: 134-137, 154-157, 160-163, 167 #22, 170-171, 172-175, 185 #22-#25, 316-319 ATE: ETL 160

OBJECTIVES	PAGE REFERENCES		
	<i>MathMatters 1</i>	<i>MathMatters 2</i>	<i>MathMatters 3</i>
PO 14. Verify characteristics of a given geometric figure using coordinate formulas such as distance, midpoint, and slope to confirm parallelism, perpendicularity, and congruency.	SE: 327 #42-#43	SE: 202, 212-215, 216-219, 245, 249, 254-256 ATE: CE 203, 213 EL 202 DI 203	SE: 248-251, 340 #4 & #16, 342-345, 348-351

Codes Used for TWE Codes

MathMatters 1

AA Alternative Assessment
 DI Differentiated Instruction
 ETL Extend the Lesson
 FG Flexible Grouping
 PE Predictable Error
 TT Teaching Tip

MathMatters 2

5MW 5-Minute Warm-up
 AA Alternative Assessment
 CE Chalkboard Examples
 DI Differentiated Instruction
 EL Extend the Lesson
 FG Flexible Grouping
 GS Getting Started
 I Introduction to Lesson
 L Lesson
 LW Lesson Wrap-up
 PE Predictable Error
 RW Refresher Wrap-up
 S The Strategy
 SP Skills Practice
 TT Teaching Tip

MathMatters 3

AA Alternative Assessment
 DI Differentiated Instruction
 ETL Extend the Lesson
 FG Flexible Grouping
 TT Teaching Tip