



IDAHO
Mathematics Standards Grade 7
MathMatters 2 © 2001

STANDARDS	PAGE REFERENCES
327. BASIC ARITHMETIC, ESTIMATION, AND ACCURATE COMPUTATIONS.	
01. Understand and use numbers.	
a. Read, write, order, and compare real numbers (integers, fractions, decimals) and absolute values.	SE: 48-49, 52-53, 54 #4-6, 55 #41-43, 60 #7-24, 61 #55-58, 608
b. Expand the use of percents and ratios to solve problems.	SE: 101 #16-21, 122-123, 124 #38, 166 #14-16, 248-249, 316-317, 478-480, 488-489 ATE: EL 474 LS 150
c. Show a sense of magnitudes and relative magnitudes of real numbers (integers, fractions, decimals).	SE: 10-11, 12 #1, 13 #16-18, 51 #1-5, 52-53, 54 #4-6, 55 #41-43, 60 #7-18, 61 #55-58, 602
d. Develop and apply number theory concepts.	SE: 52-53, 92 #1-6, 93 #22-25, 147, 162 #1-3, 241 #39-48, 524-525, 528 ATE: TT 173
e. Understand the position of rational numbers on a number line.	SE: 52, 54 #16-21, 55 #46, 60 #15, 61 #58, 71 #4, 91 #59
02. Perform computations accurately.	
a. Add, subtract, multiply, and divide fractions and decimals.	SE: 9 #36-37, 13 #35-36, 48-49, 59 #35-42, 71 #15-20, 81 #61-66, 85 #57, 603-607
b. Evaluate numerical expressions using the order of operations.	SE: 56, 58 #13-21, 59 #35-42, 60 #25-30, 61 #59-64, 71 #5-10, 74 #40-47, 80 #16-27, 81 #61-66
c. Explore the use of exponents.	SE: 56-57, 59 #35, 82-83, 84 #14-21, 86-87, 89 #32-37, 380-381, 382 #50, 386-387, 390-391
d. Explore basic operations with integers.	SE: 49 #35-46, 52-53, 54 #18, 58 #1-2, 61 #58, 70 #53-55, 71 #85-90
e. Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three.	SE: 11 #2, 16 #1, 20-22, 26-27, 105 #2, 106 #4-6, 107 #21-24, 139 #44-51, 226 #1-5 <i>Mental Math Tip 87</i>
f. Use appropriate vocabulary.	SE: 52, 76, 82-83 ATE: TT 62-63 V 56, 86 VR 60, 90
03. Estimate and judge reasonableness of results.	
a. Use estimation to predict computation results.	SE: 3 #29-40, 150, 508, 509 #7-10, 511 #25-26 ATE: CE 2
b. Recognize when estimation is appropriate and understand the usefulness of an estimate as distinct from an exact answer.	SE: 3 #29-40, 150, 151 #1-2, 508, 509 #3 ATE: EL 480 TT 2

STANDARDS	PAGE REFERENCES
c. Determine whether a given estimate is an overestimate or underestimate.	SE: 3 #29-40, 508, 509 #10 ATE: CE 2
d. Use appropriate vocabulary.	SE: 3, 26, 150 ATE: CE 2 V 2, 508 VR 14
328. MATHEMATICAL REASONING AND PROBLEM SOLVING	
01. Understand and use a variety of problem-solving skills.	
a. Use a variety of strategies including common mathematical formulas to compute problems drawn from real-world situations.	SE: 26, 92, 114, 154, 232, 358, 400, 462, 508, 530
b. Recognize pertinent information for problem solving.	SE: 19 #24, 23 #14, 31 #16, 51 #1-5, 103 #1-4, 125 #42-44, 191 #1-4, 333 #1-3, 487 #26, 497 #24
c. Make predictions and decisions based on information.	SE: 21-22, 23 #7-9, 26, 27 #4-6, 32 #1-2, 82 #1-5, 243 #1-5, 334 #1-6, 519 #1-5
02. Use reasoning skills to recognize problems and express them mathematically.	
a. Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning and concepts.	SE: 114, 115 #13-18, 126-127, 152 #5-8, 153 #22, 154-155, 254-256, 274-275, 282-285, 300-301
b. Apply solutions and strategies to new problem situations.	SE: 93 #21, 115 #13-19, 155 #1, 359 #7-9, 401 #7, 463 #8, 509 #7-10, 530, 531 #6-8
c. Formulate conjectures and discuss why they must be or seem to be true.	SE: 530, 531 #6-8, 532-533, 534 #13-16, 535 #33-35, 536 #1-4, 537 #17-20, 538-539, 542-543
03. Apply appropriate technology and models to find solutions to problems.	
a. Understand the purpose and capabilities of appropriate technology use as a tool to solve problems.	SE: 38-40, 155 #3, 248 #1-6, 356 #8-10, 497 #25 <i>Technology Note</i> 10, 29, 88, 172, 178
b. Use computer applications to display and manipulate data.	SE: 26, 75 #55-58, 155 #3, 215 #28, 248 #1-6, 270 #31-32, 319 #25, 392 #46 <i>Technology Note</i> 269, 335
c. Select appropriate models to represent mathematical ideas.	SE: 59 #31-34, 108 #1-5, 114, 115 #13-20, 154, 155 #1-2, 156 #11-14, 358, 390-391, 410 #11
04. Communicate results using appropriate terminology and methods.	
a. Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to communicate mathematical information.	SE: 114, 115 #13-18, 126-127, 152 #5-8, 153 #22, 154-155, 254-256, 274-275, 282-285, 300-301
b. Use appropriate vocabulary to communicate mathematical information.	SE: 114, 122, 150, 257 #35-36 <i>Reading Math</i> 127 ATE: V 82, 92, 274 VR 120
c. Use appropriate notation.	SE: 82, 87 #3, 520 ATE: EL 57 TT 63, 91, 521

STANDARDS	PAGE REFERENCES
329. CONCEPTS AND PRINCIPLES OF MEASUREMENT.	
01. Understand and use U.S. customary and metric measurements.	
a. Select and use appropriate units and tools to make formal measurements in both systems.	SE: 116 #1-4, 123 #1-5, 478-479, 480 #1-3 ATE: CI 143 TT 196
b. Apply estimation of measurement to real-world and content problems using actual measuring devices.	SE: 116 #1-4, 136 #1-3, 434 #9-16, 478 #1-3 ATE: EL 480
c. Recognize the differences between measures of length, area, and volume (capacity) in both systems.	SE: 74 #54, 122 #1-5, 432-433, 435 #20, 452-453, 578, 581 ATE: TT 418, 419, 422, 427
d. Solve problems involving length, perimeter, area, volume (capacity), weight, mass, and temperature.	SE: 456-457, 458 #9-12, 459 #1-10, 461 #23-28, 462-463 ATE: TT 418, 419, 422
e. Convert unit of measurement within each system.	SE: 74 #54, 122 #1-5, 125 #45-47, 578, 581 <i>MathWorks</i> 131
f. Use appropriate vocabulary.	SE: 116, 122, 422-423 ATE: V 432, 452, 478 VR 430
02. Apply concepts of rates and other derived or indirect measurements.	
a. Develop the use of rates to make indirect measurements.	SE: 251 #36-40, 257 #34, 267 #24, 275 #15-19, 276 #1-5, 478-479, 480 #9-11, 481 #20 ATE: CE 509
03. Apply the concepts of ratios and proportions.	
a. Develop the use of proportions, ratios, and scales.	SE: 100, 122-123, 124 #11, 248-249, 257 #35-37, 264-265, 276, 375, 470-471, 478-479
04. Apply dimensional analysis.	
a. Understand units and their relationship to one another and to real-world applications.	SE: 122, 123 #2, 138 #39, 251 #36-40, 257 #35-37, 267 #24, 578, 581 <i>MathWorks</i> 131 ATE: QA 419
330. CONCEPTS AND LANGUAGE OF ALGEBRA.	
01. Use algebraic symbolism as a tool to represent mathematical relationships.	
a. Develop the use of variables in simple expressions and equations.	SE: 57, 58 #7-10, 59 #35-42, 60 #34-39, 62-64, 65 #58, 66-67, 69 #48-50, 72-73, 76-77
b. Translate simple word statements and story problems into algebraic expressions and equations.	SE: 62-63, 64 #14-29, 65 #49-53, 68 #14, 69 #51-55, 70 #1-12, 75 #55-56, 77 #3, 78 #11, 79 #50
c. Use symbols (<, >, =, <, >, ≠) to express relationships.	SE: 126-127, 128 #13-16, 129 #40, 132-133, 134 #1-9, 135 #42, 142 #16-21, 144 #29-30, 580 ATE: TT 130
02. Evaluate algebraic expressions.	
a. Develop an understanding of evaluating mathematical and algebraic expressions: commutative, associative, identity, zero, inverse, and substitution.	SE: 56-57, 58 #16-25, 59 #35-42, 60 #25-30, 61 #59-64, 66-67, 72-73, 76-77, 596-597 ATE: TT 90

STANDARDS	PAGE REFERENCES
b. Understand and use the order of operations in evaluating basic algebraic expressions.	SE: 56-57, 60 #34-48, 67, 68 #36-43, 72-73, 74 #54, 76-77, 596 <i>Think Back</i> 66 ATE: QA 58
03. Solve algebraic equations and inequalities.	
a. Solve one-step equations using inverse operations.	SE: 108-109, 110 #7-15, 111 #51-54, 112 #50-53, 113 #60-65, 276, 278 #1, 280 #12-16, 282, 284 #9-12
b. Explore solutions of simple one-step equations using negative numbers.	SE: 108, 110 #22-24, 111 #45, 112 #29-31, 113 #57-58, 280 #15-16, 282, 284 #11 ATE: EL 279
c. Explore graphical representation to show simple linear equations.	SE: 254-256, 257 #35-37, 263 #13-18, 264-265, 278 #18
331. CONCEPTS AND PRINCIPLES OF GEOMETRY.	
01. Apply concepts of size, shape, and spatial relationships.	
a. Precisely describe, classify, and understand relationships among types of one-, two-, and three-dimensional objects using their defining properties.	SE: 422-423, 426-427, 432-434, 452-453, 456-458, 474-476, 478-479, 488-490, 498-499, 592-595
b. Construct and measure various angles and shapes using appropriate tools.	SE: 197-198, 199 #23, 204 #32-34, 206-207, 222 #1-4, 226 #1-5, 227-228, 232, 293 #27-34 ATE: TT 196
c. Apply fundamental concepts, properties, and relationships among points, lines, angles, and shapes.	SE: 192-194, 196-198, 199 #23, 202-203, 204 #32-34, 206-207, 216-217, 222-223, 226-228, 232
d. Recognize and apply congruence, similarities, and symmetry of shapes.	SE: 197, 202-203, 212-213, 214 #10-14, 215 #27, 216-217, 220 #1-6, 231 #28-35, 310-311, 312 #8-10
e. Apply formulas for perimeter, circumference, and area to triangles, quadrilaterals, and circles.	SE: 146 #13-22, 226 #1-5, 418-419, 429 #20-22, 430 #16-18, 462-463, 594-595
f. Explore the concept of surface area and volume (capacity).	SE: 419 #13-15, 426-427, 428 #19, 432-433, 434 #1-8, 435 #23-25, 452-453, 454 #1-4, 456-457, 458 #1-4
g. Explore and model the effects of reflections, translations, and rotations on various shapes.	SE: 296-297, 298 #16-18, 299 #25, 300-301, 302 #22-23, 304 #1-4, 305 #24-26, 306-308, 309 #13-14, 316-317
h. Use appropriate vocabulary.	SE: 202, 296, 300, 306, 316, 422-423 ATE: V 192, 206 VR 304, 314
02. Apply the geometry of right triangles.	
a. Explore right triangle geometry.	SE: 478-479, 480 #1-4, 484-485, 488-490, 491 #40-43, 494-495, 496 #18-20, 498-499, 500 #26, 504-506
03. Apply graphing in two dimensions.	
a. Identify and plot points on a coordinate plane.	SE: 20-23, 240 #1-8, 244, 246 #18, 264-265, 292, 296-297, 298 #1-5, 306, 316

STANDARDS	PAGE REFERENCES
332. DATA ANALYSIS, PROBABILITY AND STATISTICS.	
01. Understand data analysis.	
a. Read and interpret tables, charts, and graphs (scatter plots, line graphs, bar graphs, pie charts).	SE: 2, 16-17, 20-23, 26-27, 34-35, 75 #66-68, 111 #60-62, 232-233, 251 #41-44, 254-256
b. Explain and justify conclusions drawn from tables, charts, and graphs.	SE: 2, 16-17, 20-23, 26-27, 34-35, 75 #66-68, 111 #60-62, 232-233, 248 #1-6, 251 #41-44
c. Understand and use appropriate vocabulary.	SE: 16-17, 20-21, 248 ATE: V 2, 232 VR 24, 42
02. Collect, organize, and display data.	
a. Collect, organize, and display data with appropriate notation in tables, charts, and graphs (scatter plots, line graphs, bar graphs, pie charts).	SE: 2, 16-17, 18 #11-12, 20-23, 34-35, 38-40, 75 #66-68, 232-233, 248 #1-6
03. Apply simple statistical measurements.	
a. Understand and use the measures of central tendency – mean, median, and mode, with simple sets of data.	SE: 10-11, 12 #6-10, 13 #16-18, 14 #9-14, 15 #1-6, 16-17, 19 #17-21, 28-29, 33 #1-4, 596
b. Explore the significance of range, frequency, and informal distribution.	SE: 10-11, 12 #1-2, 13 #22, 15 #4, 16-17, 18 #1, 111 #60-61, 145 #1-4, 150, 195 #35-38
04. Understand basic concepts of probability.	
a. Predict, perform, and record results of simple probability experiments.	SE: 150-151, 152 #9, 153 #13-15, 154-155, 156 #5-7, 171 #29 <i>MathWorks</i> 157
b. Understand and use the language of probability.	SE: 150, 158-159, 162, 168-169, 172, 178 ATE: QA 164, 170 VR 156, 176
c. Recognize equally likely outcomes.	SE: 154-155, 158-159, 160 #11, 161 #21, 162-163, 164 #19, 168 #1-5
05. Make predictions or decisions based on data.	
a. Make predictions based on simple experimental and theoretical probabilities.	SE: 150-152, 153 #13, 158-159, 161 #27, 162-163, 164 #13-16, 166 #1-5
b. Understand and use appropriate vocabulary.	SE: 150, 158-159, 162, 168-169, 172, 178 ATE: QA 164, 170 VR 156, 176
333. FUNCTIONS AND MATHEMATICAL MODELS.	
01. Understand the concept of functions.	
a. Extend patterns and identify a rule (function) that generates the pattern using real numbers.	SE: 92, 93 #25, 274, 275 #5-6, 276-277, 278 #18, 279 #20, 282-283
b. Use functional relationships to explain how a change in one quantity results in a change in another.	SE: 264-265, 266 #6, 267 #24, 268-269, 270 #28-30, 272 #24-27, 274 #1-2
c. Understand and use appropriate vocabulary.	SE: 274-275, 276 ATE: TT 280 V 264 VR 272

STANDARDS	PAGE REFERENCES
02. Represent equations, inequalities, and functions in a variety of formats.	
a. Represent a simple set of data in a table, as a graph, and as a mathematical relationship.	SE: 5 #1-4, 26-27, 254-256, 261 #37, 264-265, 268-269, 270 #28-30 <i>MathWorks</i> 33, 273
03. Apply functions to a variety of problems.	
a. Use patterns and functions to represent and solve problems.	SE: 270 #28-30, 274, 275 #15-19, 276-277, 278 #15, 279 #20, 282-283

Codes Used for ATE Pages

CE	Chalkboard Examples
CI	Chapter Investigation
EL	Extend the Lesson
LS	Learning Styles
QA	Quick Assessment
TT	Teaching Tips
V	Vocabulary
VR	Vocabulary Review