



IDAHO
Mathematics Standards Grade 7
Impact Mathematics: Algebra and More
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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: 218-219, 222-227 <i>On Your Own Exercises</i> 30 #55-56, 51 #30, 90 #22-27, 418 #44-46 <i>Lab Investigation</i> 220-222
b. Expand the use of percents and ratios to solve problems.	SE: 521-524, 527-529, 529-531, 562-565, 566-568, 568-571, 572-574 <i>On Your Own Exercises</i> 575-582
c. Show a sense of magnitudes and relative magnitudes of real numbers (integers, fractions, decimals).	SE: 191-192, 192-195 <i>On Your Own Exercises</i> 206-207
d. Develop and apply number theory concepts.	SE: 73 #55, 163 #59 <i>Remember</i> 73, 163 <i>On Your Own Exercises</i> 175 #81-83, 418 #41-43
e. Understand the position of rational numbers on a number line.	SE: 222-227, 255-258, 259-262 <i>On Your Own Exercises</i> 236-237 #1-28
02. Perform computations accurately.	
a. Add, subtract, multiply, and divide fractions and decimals.	SE: 13-18, 147-149 <i>On Your Own Exercises</i> 30 #49-54, #57-62 90 #34-37, 140 #21-26, 163 #62-70, 189 #25-32
b. Evaluate numerical expressions using the order of operations.	SE: 5-9, 10-13, 13-18, 18-21, 32-36 <i>On Your Own Exercises</i> 22-30
c. Explore the use of exponents.	SE: 146-149, 149-152, 152-156, 156-159, 166-167, 168-171 <i>On Your Own Exercises</i> 160-163, 172-175
d. Explore basic operations with integers.	SE: 218-219, 222-227, 228-230, 231-233, 242-244, 245-247, 248-249 <i>Lab Investigation</i> 220-222 <i>On Your Own Exercises</i> 236-240, 250-252
e. Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three.	SE: 37-42, 200-202, 588-589 <i>Lab Investigation</i> 42-45, 203-205, 388-391, 551-553
f. Use appropriate vocabulary.	SE: <i>Think & Discuss</i> 179, 219, 229 <i>Share & Summarize</i> 182, 192, 230, 247
03. Estimate and judge reasonableness of results.	
a. Use estimation to predict computation results.	SE: 13-18, 18-21, 37-42, 192-195, 588-589, 629-631 <i>Lab Investigation</i> 551-553

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b. Recognize when estimation is appropriate and understand the usefulness of an estimate as distinct from an exact answer.	SE: 13-18, 18-21, 37-42, 192-195, 588-589, 629-631 <i>Lab Investigation</i> 551-553 <i>On Your Own Exercises</i> 704 #13
c. Determine whether a given estimate is an overestimate or underestimate.	SE: 385-387, 541-542 <i>Lab Investigation</i> 388-391 <i>On Your Own Exercises</i> 392-393, 704 #13
d. Use appropriate vocabulary.	SE: 588-589 <i>Lab Investigation</i> 551-553 <i>On Your Own Exercises</i> 591-595 #5-12
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: 37-42, 269-272, 273-275 <i>Lab Investigation</i> 42-45 <i>On Your Own Exercises</i> 276-278
b. Recognize pertinent information for problem solving.	SE: 130-131, 131-134, 134-135, 385-387 <i>Lab Investigation</i> 119-121 <i>On Your Own Exercises</i> 136-140
c. Make predictions and decisions based on information.	SE: 130-131, 131-134, 134-135, 385-387, 588-589 <i>Lab Investigation</i> 119-121 <i>On Your Own Exercises</i> 136-140, 591-595 #5-12
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: 52-55, 56-58, 79-80, 80-82, 82-83, 116-119, 131-134, 322-325, 395-397 <i>Lab Investigation</i> 388-391
b. Apply solutions and strategies to new problem situations.	SE: 385-387, 395-397, 489-491, 588-589, 694-696, 697-699
c. Formulate conjectures and discuss why they must be or seem to be true.	SE: 134-135, 694-696 <i>Lab Investigation</i> 121 #9-11 <i>Just the Facts</i> 125 <i>Share & Summarize</i> 397, 403, 412
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: 200-202 <i>Lab Investigation</i> 42-45, 388-391 TG: T201
b. Use computer applications to display and manipulate data.	SE: 670-671 <i>Lab Investigation</i> 42-45, 388-391 <i>On Your Own Exercises</i> 700 #3
c. Select appropriate models to represent mathematical ideas.	SE: 409-411, 585-587 <i>Lab Investigation</i> 42-45, 388-391, 608-609 <i>Share & Summarize</i> 412, 414, 587, 589 TG: AL T398

STANDARDS	PAGE REFERENCES
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: 52-55, 56-58, 79-80, 81-82, 82-83, 116-119, 131-134, 322-325, 395-397 <i>Lab Investigation</i> 388-391
b. Use appropriate vocabulary to communicate mathematical information.	SE: 451-453, 454-455, 521-524, 588-589, 697-699 <i>Share & Summarize</i> 587
c. Use appropriate notation.	SE: 92-93, 94-96, 130-131, 131-134, 134-135 <i>Lab Investigation</i> 119-121, 608-609 <i>On Your Own Exercises</i> 136-140
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: 37-42, 451-453, 454-455, 461-463, 472-473, 475 <i>On Your Own Exercises</i> 48 #11, 49-50, 465 #5-6
b. Apply estimation of measurement to real-world and content problems using actual measuring devices.	SE: 37-42, 451-453, 454-455, 461-463, 472-473, 475 <i>On Your Own Exercises</i> 48 #11-12, 49-50
c. Recognize the differences between measures of length, area, and volume (capacity) in both systems.	SE: 451-453, 454-455, 497-498, 499-500, 501-504 <i>Explore</i> 471 TG: AL T452 SA T452
d. Solve problems involving length, perimeter, area, volume (capacity), weight, mass, and temperature.	SE: 37-42, 482-484, 485-488, 489-491, 497-498, 499-500, 501-504
e. Convert unit of measurement within each system.	SE: 4, 37-42, 134-135, 231, 244 #2-3, 261 <i>Lab Investigation</i> 119-121
f. Use appropriate vocabulary.	SE: 37-42 <i>Share & Summarize</i> 484, 488, 498, 500, 505 <i>Think & Discuss</i> 504
02. Apply concepts of rates and other derived or indirect measurements.	
a. Develop the use of rates to make indirect measurements.	SE: 176-178, 179-182, 301-305, 305-308 <i>On Your Own Exercises</i> 183-187
03. Apply the concepts of ratios and proportions.	
a. Develop the use of proportions, ratios, and scales.	SE: 520-524, 524-526, 527-529, 540-542, 543-545, 545-548 <i>On Your Own Exercises</i> 532-537
04. Apply dimensional analysis.	
a. Understand units and their relationship to one another and to real-world applications.	SE: 529-531, 543-545 <i>On Your Own Exercises</i> 535 #14-23, 537-538 #30-31
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: 4-9, 10-13, 13-18, 18-21, 34-36, 37-42 <i>On Your Own Exercises</i> 22-30

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b. Translate simple word statements and story problems into algebraic expressions and equations.	SE: 10-13, 34-36, 384-387, 395-397, 398-401, 402-403, 410-411 <i>On Your Own Exercises</i> 23-25 #7-17, 28-29 #40-42
c. Use symbols (<, >, =, <, >, ≠) to express relationships.	SE: 232 <i>On Your Own Exercises</i> 251 #40-41 <i>Think & Discuss</i> 525
02. Evaluate algebraic expressions.	
a. Develop an understanding of evaluating mathematical and algebraic expressions: commutative, associative, identity, zero, inverse, and substitution.	SE: 52-53, 59-63, 64-67, 627-628 <i>Think & Discuss</i> 14 <i>On Your Own Exercises</i> 69-71 #16-19, #40 <i>Review and Self-Assessment</i> 75 #10-16 TG: TD T32 PSWU T148
b. Understand and use the order of operations in evaluating basic algebraic expressions.	SE: 4-9, 13-18, 18-21, 152-156 <i>On Your Own Exercises</i> 69 #16-19
03. Solve algebraic equations and inequalities.	
a. Solve one-step equations using inverse operations.	SE: 18-21 <i>On Your Own Exercises</i> 31 #63-65, 51 #26-28
b. Explore solutions of simple one-step equations using negative numbers.	SE: <i>Share & Summarize</i> 227 <i>On Your Own Exercises</i> 251 #38-39
c. Explore graphical representation to show simple linear equations.	SE: 348-350, 351-353, 368-370, 437-439 <i>On Your Own Exercises</i> 371-372, 441-443
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: 91-93, 94-96, 109, 112-116, 131-134, 134-135, 187 #20 <i>Lab Investigation</i> 119-121 <i>On Your Own Exercises</i> 122-124
b. Construct and measure various angles and shapes using appropriate tools.	SE: 475 <i>Remember</i> 387 <i>Lab Investigation</i> 476-477 <i>On Your Own Exercises</i> 707 #26
c. Apply fundamental concepts, properties, and relationships among points, lines, angles, and shapes.	SE: 91-93, 94-96, 97, 130-131, 134-135 <i>Remember</i> 142
d. Recognize and apply congruence, similarities, and symmetry of shapes.	SE: 450-453, 454-455, 461-463, 471-473, 473-474 <i>On Your Own Exercises</i> 464-469 <i>Lab Investigation</i> 476-477
e. Apply formulas for perimeter, circumference, and area to triangles, quadrilaterals, and circles.	SE: 130-131, 131-134, 134-135, 485-488, 489-491
f. Explore the concept of surface area and volume (capacity).	SE: 98-99, 109-112, 112-116, 116-119, 498, 499-500, 501-504 <i>Lab Investigation</i> 119-121 <i>On Your Own Exercises</i> 122-126, 136-139
g. Explore and model the effects of reflections, translations, and rotations on various shapes.	SE: 130-131, 131-134, 255-258, 259-262 TG: AL T452

STANDARDS	PAGE REFERENCES
h. Use appropriate vocabulary.	SE: <i>Think & Discuss</i> 74, 98, 109 <i>Share & Summarize</i> 93, 96, 112, 131
02. Apply the geometry of right triangles.	
a. Explore right triangle geometry.	SE: 269-272, 273-275 <i>On Your Own Exercises</i> 276-278
03. Apply graphing in two dimensions.	
a. Identify and plot points on a coordinate plane.	SE: 259-262, 262-263 <i>On Your Own Exercises</i> 264-266, 279 #29
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: 685 #4, 710-714, 714-717 <i>On Your Own Exercises</i> 675 #14, 687 #6, 718-722 <i>Review and Self-Assessment</i> 727 #5-6
b. Explain and justify conclusions drawn from tables, charts, and graphs.	SE: 676-678, 678-680, 692-694, 697-699 <i>On Your Own Exercises</i> 700-707
c. Understand and use appropriate vocabulary.	SE: <i>Think & Discuss</i> 709, 714, 717
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: 685 #4, 710-714, 714-717 <i>On Your Own Exercises</i> 675 #14, 687 #6, 718-722 <i>Review and Self-Assessment</i> 727 #5-6
03. Apply simple statistical measurements.	
a. Understand and use the measures of central tendency – mean, median, and mode, with simple sets of data.	SE: 694-696, 710-714 <i>On Your Own Exercises</i> 31 #67, 703-704 #11-12 <i>Remember</i> 703, 711 <i>Review and Self-Assessment</i> 727 #5-6
b. Explore the significance of range, frequency, and informal distribution.	SE: 710-714, 714-715
04. Understand basic concepts of probability.	
a. Predict, perform, and record results of simple probability experiments.	SE: 666-668, 668-671, 676-678, 678-680, 692-694, 697-699 <i>On Your Own Exercises</i> 672-674
b. Understand and use the language of probability.	SE: 666-668, 668-671, 676-678, 678-680, 692-694, 697-699 <i>On Your Own Exercises</i> 672-674
c. Recognize equally likely outcomes.	SE: 666-668, 668-671, 676-678, 680-682, 683-685 <i>Lab Investigation</i> 312-313 <i>On Your Own Exercises</i> 672-674
05. Make predictions or decisions based on data.	
a. Make predictions based on simple experimental and theoretical probabilities.	SE: 676-678, 678-680, 692-694, 697-699 <i>On Your Own Exercises</i> 700-707
b. Understand and use appropriate vocabulary.	SE: 676-678, 678-680, 692-694, 697-699 <i>On Your Own Exercises</i> 700-707

STANDARDS	PAGE REFERENCES
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: 644-647, 648-649, 650-651 <i>On Your Own Exercises</i> 652-658 <i>Review and Self-Assessment</i> 662-663 #4-5
b. Use functional relationships to explain how a change in one quantity results in a change in another.	SE: 362-364, 365-368, 368-370 <i>On Your Own Exercises</i> 371-376 <i>Review and Self-Assessment</i> 380 #6-9
c. Understand and use appropriate vocabulary.	SE: 362-364, 365-368, 368-370 <i>On Your Own Exercises</i> 371-376 <i>Review and Self-Assessment</i> 380 #6-9
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: 345-347, 348-350, 351-353 <i>On Your Own Exercises</i> 354-360 <i>Review and Self-Assessment</i> 379-380 #2-5
03. Apply functions to a variety of problems.	
a. Use patterns and functions to represent and solve problems.	SE: 348-350, 353 <i>On Your Own Exercises</i> 357-360 #10, 15, 17, 372 #11

Codes Used for TG Pages

AL	Access for All Learners
PSWU	Problem Set Wrap-Up
SA	On the Spot Assessment
TD	Think & Discuss