



IDAHO
Mathematics Standards Grade 7
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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.	<i>Buyer Beware</i> SE: 6-7, 18-19, 20-21, 26-27, 28-29, 30-31, 38, 42, 43 TG: 35, 58 A22 <i>Making Mathematical Arguments</i> SE: 6-7, 8-9, 10-11
b. Expand the use of percents and ratios to solve problems.	<i>Buyer Beware</i> SE: 16-17, 18-19, 20-21, 22-23, 26-27, 28-29, 38, 39 TG: 34, 36, 56, 58 <i>From the Ground Up</i> SE: 28-29, 30-31, 43
c. Show a sense of magnitudes and relative magnitudes of real numbers (integers, fractions, decimals).	<i>Buyer Beware</i> SE: 6-7, 8-9, 10-11, 18-19 TG: 16 <i>From the Ground Up</i> SE: 8-9 <i>Making Mathematical Arguments</i> SE: 39 #15
d. Develop and apply number theory concepts.	<i>Making Mathematical Arguments</i> SE: 26-27, 28-29, 30-31, 32-33, 44 #14 TG: 56 <i>The Language of Algebra</i> SE: 20-21
e. Understand the position of rational numbers on a number line.	<i>The Language of Algebra</i> SE: 6-7, 8-9, 10-11, 12-13, 18-19, 26-27, 28-29, 30-31, 34, 35, 36, 37 TG: 18 <i>Getting Down to Business</i> SE: 10-11
02. Perform computations accurately.	
a. Add, subtract, multiply, and divide fractions and decimals.	<i>Making Mathematical Arguments</i> SE: 8-9 <i>From the Ground Up</i> SE: 12-13, 26-27, 32-33
b. Evaluate numerical expressions using the order of operations.	<i>Getting Down to Business</i> SE: 16-17
c. Explore the use of exponents.	<i>Making Mathematical Arguments</i> SE: 16-17, 18-19, 20-21, 22-23 TG: 34

STANDARDS	PAGE REFERENCES
d. Explore basic operations with integers.	<i>Making Mathematical Arguments</i> SE: 10-11, 12-13 <i>The Language of Algebra</i> SE: 18-19 <i>Getting Down to Business</i> SE: 8-9, 24-25
e. Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three.	<i>Getting Down to Business</i> SE: 14-15, 16-17, 18-19, 39, 41 <i>Buyer Beware</i> SE: 26-27 TG: 35, 60 <i>Making Mathematical Arguments</i> SE: 6-7, 8-9, 36-37 TG: 12, 13 <i>From the Ground Up</i> SE: 22-23
f. Use appropriate vocabulary.	<i>Making Mathematical Arguments</i> TG: 36, 48, 56, 64
03. Estimate and judge reasonableness of results.	
a. Use estimation to predict computation results.	<i>Buyer Beware</i> SE: 10-11, 26-27 <i>From the Ground Up</i> SE: 12-13, 32-33, 37, 45 TG: 26, 30
b. Recognize when estimation is appropriate and understand the usefulness of an estimate as distinct from an exact answer.	<i>Buyer Beware</i> SE: 10-11, 26-27 TG: 60 <i>From the Ground Up</i> SE: 12-13, 28-29, 32-33, 37, 45 TG: 26, 30 <i>Getting in Shape</i> SE: 30-31 TG: 66
c. Determine whether a given estimate is an overestimate or underestimate.	<i>Buyer Beware</i> SE: 10-11 <i>From the Ground Up</i> SE: 12-13, 32-33, 45 TG: 28
d. Use appropriate vocabulary.	<i>Buyer Beware</i> TG: 58 <i>From the Ground Up</i> TG: 26, 62

STANDARDS	PAGE REFERENCES
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.	<i>Chance Encounters</i> SE: 8-9, 10-11, 26-27, 36, 42 TG: 20, 22, 60 <i>Getting in Shape</i> SE: 10-11, 18-19, 26-27, 28-29, 40 TG: 22, 42, 56, 60 <i>Getting Down to Business</i> SE: 14-15, 16-17, 18-19 TG: 32, 36
b. Recognize pertinent information for problem solving.	<i>Chance Encounters</i> SE: 8-9, 10-11, 34-35, 42 TG: 20, 22, 76 <i>Getting in Shape</i> SE: 10-11, 20-21, 32-33, 40 TG: 24, 46, 71 <i>Getting Down to Business</i> SE: 36
c. Make predictions and decisions based on information.	<i>Chance Encounters</i> SE: 8-9, 10-11, 34-35, 36, 42 TG: 20, 76 <i>Getting Down to Business</i> SE: 22-23, 34-35, 36, 44 TG: 52, 78 <i>Getting in Shape</i> SE: 20-21, 22-23, 32-33, 40 TG: 46, 50, 70
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.	<i>Chance Encounters</i> SE: 8-9, 10-11, 34-35, 36, 42 TG: 20, 22, 78 <i>Getting Down to Business</i> SE: 10-11, 14-15, 18-19, 36, 37 <i>Getting in Shape</i> SE: 6-7, 8-9 TG: 14
b. Apply solutions and strategies to new problem situations.	<i>Chance Encounters</i> SE: 8-9, 10-11, 26-27, 34-35, 36, 42 TG: 20, 22, 60, 78 <i>Getting Down to Business</i> SE: 10-11, 18-19, 36, 37 TG: 22, 24
c. Formulate conjectures and discuss why they must be or seem to be true.	<i>Chance Encounters</i> SE: 8-9, 10-11, 34-35, 36, 42 TG: 20, 22, 78 <i>Getting Down to Business</i> SE: 10-11, 14-15, 18-19 TG: 22, 24

STANDARDS	PAGE REFERENCES
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.	<i>Getting Down to Business</i> SE: 14-15, 24-25, 32-33, 40, 41 TG: 31, 34, 49, 54, 67 <i>The Language of Algebra</i> TG: 13, 34-35 <i>Chance Encounters</i> TG: 31, 49
b. Use computer applications to display and manipulate data.	<i>Chance Encounters</i> TG: 13 <i>Getting Down to Business</i> SE: 14-15 TG: 13, 30-31 <i>Making Mathematical Arguments</i> SE: 40 TG: 5
c. Select appropriate models to represent mathematical ideas.	<i>Getting Down to Business</i> SE: 14-15, 16-17, 18-19, 24-25, 32-33, 40, 41, 42 TG: 30-31, 49, 56, 67
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.	<i>Chance Encounters</i> SE: 6-7, 22-23, 30-31, 36 TG: 14, 50, 52, 68 <i>Making Mathematical Arguments</i> SE: 30-31, 44
b. Use appropriate vocabulary to communicate mathematical information.	<i>Chance Encounters</i> SE: 6-7, 36 TG: 14 <i>Getting in Shape</i> SE: 32-33 TG: 70 <i>Making Mathematical Arguments</i> SE: 26-27, 28-29 TG: 60, 62
c. Use appropriate notation.	<i>Chance Encounters</i> SE: 36, 45 <i>Making Mathematical Arguments</i> SE: 22-23, 30-31 TG: 37, 48
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.	<i>Buyer Beware</i> SE: 12-13 <i>From the Ground Up</i> SE: 6-7, 10-11, 12-13, 34, 35 TG: 14 <i>Getting in Shape</i> SE: 6-7, 12-13, 18-19 TG: 14, 28

STANDARDS	PAGE REFERENCES
b. Apply estimation of measurement to real-world and content problems using actual measuring devices.	<i>From the Ground Up</i> SE: 12-13, 20-21 TG: 12, 26, 44 <i>Getting in Shape</i> SE: 6-7, 30-31, 34 TG: 14, 66
c. Recognize the differences between measures of length, area, and volume (capacity) in both systems.	<i>From the Ground Up</i> SE: 6-7, 9-10, 12-13, 18-19, 20-21, 22-23 TG: 14, 50 <i>Getting in Shape</i> SE: 28-29 TG: 64
d. Solve problems involving length, perimeter, area, volume (capacity), weight, mass, and temperature.	<i>Buyer Beware</i> SE: 12-13 <i>From the Ground Up</i> SE: 6-7, 8-9, 10-11, 12-13, 18-19, 20-21, 22-23, 30-31, 32-33, 36 TG: 14 <i>Getting in Shape</i> SE: 28-29 TG: 64
e. Convert unit of measurement within each system.	<i>From the Ground Up</i> SE: 6-7 <i>The Language of Algebra</i> SE: 20-21 TG: 46
f. Use appropriate vocabulary.	<i>From the Ground Up</i> SE: 34, 36, 37 <i>Getting in Shape</i> SE: 7, 33 TG: 16
02. Apply concepts of rates and other derived or indirect measurements.	
a. Develop the use of rates to make indirect measurements.	<i>Buyer Beware</i> Rate is used in percentage of price and as ratio and proportion. SE: 6-7, 16-17, 18-19, 22-23, 34, 38-39 TG: 12 (rate is defined)
03. Apply the concepts of ratios and proportions.	
a. Develop the use of proportions, ratios, and scales.	<i>Buyer Beware</i> SE: 16-17, 18-19, 20-21, 22-23, 38, 39, 40, 41 TG: 34, 36, 40, 44, 46 <i>From the Ground Up</i> SE: 8-9 TG: 56
04. Apply dimensional analysis.	
a. Understand units and their relationship to one another and to real-world applications.	<i>From the Ground Up</i> SE: 6-7, 10-11, 12-13 TG: 12

STANDARDS	PAGE REFERENCES
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.	<i>The Language of Algebra</i> SE: 6-7, 12-13, 34 TG: 12, 14, 16
b. Translate simple word statements and story problems into algebraic expressions and equations.	<i>The Language of Algebra</i> SE: 6-7, 12-13, 35, 40 TG: 14, 16 <i>Making Mathematical Arguments</i> SE: 8-9 TG: 18
c. Use symbols (<, >, =, <, >, ≠) to express relationships.	<i>From the Ground Up</i> SE: 43 #12 <i>The Language of Algebra</i> SE: 8-9, 35 TG: 18, 20
02. Evaluate algebraic expressions.	
a. Develop an understanding of evaluating mathematical and algebraic expressions: commutative, associative, identity, zero, inverse, and substitution.	<i>The Language of Algebra</i> SE: 10-11 TG: 24
b. Understand and use the order of operations in evaluating basic algebraic expressions.	Note: Use order of operation determine equivalence in the following examples. <i>The Language of Algebra</i> SE: 10-11, 36
03. Solve algebraic equations and inequalities.	
a. Solve one-step equations using inverse operations.	<i>The Language of Algebra</i> SE: 16-17, 26-27, 28-29, 30-31, 40, 42 TG: 38, 56, 58, 62, 66
b. Explore solutions of simple one-step equations using negative numbers.	<i>The Language of Algebra</i> SE: 18-19, 42 TG: 42
c. Explore graphical representation to show simple linear equations.	<i>The Language of Algebra</i> SE: 16-17, 18-19, 26-27, 32-33, 39, 42, 45 TG: 42, 56, 58, 70
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.	<i>From the Ground Up</i> SE: 16-17, 30-31, 38 TG: 34, 36 <i>Getting Down to Business</i> SE: 6-7, 8-9, 16-17, 18-19, 20-21, 26-27 TG: 34, 36, 38, 40
b. Construct and measure various angles and shapes using appropriate tools.	<i>From the Ground Up</i> SE: 6-7, 10-11, 18-19, 30-31, 34 TG: 16, 22, 40 <i>Getting in Shape</i> SE: 6-7, 8-9, 16-17, 18-19 TG: 14, 18, 34, 38, 40

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c. Apply fundamental concepts, properties, and relationships among points, lines, angles, and shapes.	<i>From the Ground Up</i> SE: 6-7, 10-11, 30-31, 34 TG: 13 <i>Getting in Shape</i> SE: 6-7, 8-9, 16-17, 18-19, 32-33 TG: 34, 38, 40, 42, 70
d. Recognize and apply congruence, similarities, and symmetry of shapes.	<i>From the Ground Up</i> SE: 30-31 TG: 13 <i>Getting in Shape</i> SE: 10-11, 12-13, 16-17, 22-23, 32-33 TG: 23, 24, 34, 38, 48, 70
e. Apply formulas for perimeter, circumference, and area to triangles, quadrilaterals, and circles.	<i>From the Ground Up</i> SE: 6-7, 12-13, 18-19, 20-21, 22-23, 26-27, 30-31, 34, 37, 40 TG: 16, 34-35, 44, 46 <i>Getting in Shape</i> SE: 26-27, 28-29, 30-31, 32-33 TG: 56, 57, 60, 62, 66, 68, 72
f. Explore the concept of surface area and volume (capacity).	<i>From the Ground Up</i> SE: 30-31
g. Explore and model the effects of reflections, translations, and rotations on various shapes.	<i>From the Ground Up</i> SE: 30-31 TG: 13 <i>Getting in Shape</i> SE: 10-11, 12-13, 20-21, 32-33 TG: 26, 28, 44, 46, 70
h. Use appropriate vocabulary.	<i>From the Ground Up</i> TG: 34-35, 36 <i>Getting in Shape</i> TG: 12-13, 26, 36, 48, 56, 60
02. Apply the geometry of right triangles.	
a. Explore right triangle geometry.	<i>Getting in Shape</i> SE: 6-7, 8-9, 10-11, 34 TG: 14, 18, 22
03. Apply graphing in two dimensions.	
a. Identify and plot points on a coordinate plane.	<i>Getting Down to Business</i> SE: 22-23, 24-25, 42, 43, 44 TG: 52 <i>Getting in Shape</i> SE: 26-27

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).	<i>Buyer Beware</i> SE: 10-11 <i>Chance Encounters</i> SE: 30-31, 32-33 <i>From the Ground Up</i> SE: 28-29, 44 <i>Making Mathematical Arguments</i> SE: 32-33, 44, 45 TG: 70
b. Explain and justify conclusions drawn from tables, charts, and graphs.	<i>Buyer Beware</i> SE: 8-9, 10-11 <i>Chance Encounters</i> SE: 6-7, 8-9, 32-33 <i>From the Ground Up</i> SE: 28-29, 44 <i>Making Mathematical Arguments</i> SE: 26-27, 32-33, 44-45 TG: 70
c. Understand and use appropriate vocabulary.	<i>Buyer Beware</i> TG: 18, 20 <i>Making Mathematical Arguments</i> TG: 70 <i>Chance Encounters</i> TG: 18
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).	<i>Buyer Beware</i> SE: 8-9, 10-11, 16-17 TG: 22 <i>Chance Encounters</i> SE: 6-7, 8-9, 32-33 <i>From the Ground Up</i> SE: 28-29, 44 <i>Making Mathematical Arguments</i> SE: 26-27, 44, 45
03. Apply simple statistical measurements.	
a. Understand and use the measures of central tendency – mean, median, and mode, with simple sets of data.	<i>Chance Encounters</i> SE: 30-31 TG: 72 <i>Getting Down to Business</i> TG: 48 <i>Making Mathematical Arguments</i> SE: 42
b. Explore the significance of range, frequency, and informal distribution.	<i>Chance Encounters</i> SE: 14-15 TG: 32, 70

STANDARDS	PAGE REFERENCES
04. Understand basic concepts of probability.	
a. Predict, perform, and record results of simple probability experiments.	<i>Chance Encounters</i> SE: 8-9, 14-15, 16-17, 18-19, 22-23, 26-27, 30-31, 32-33, 34-35, 40, 44 TG: 58
b. Understand and use the language of probability.	<i>Chance Encounters</i> SE: 22, 30-31, 34-35 TG: 12-13, 14, 38, 70
c. Recognize equally likely outcomes.	<i>Chance Encounters</i> SE: 8-9, 22-23, 24-25, 26-27, 30-31 TG: 48, 52, 54
05. Make predictions or decisions based on data.	
a. Make predictions based on simple experimental and theoretical probabilities.	<i>Chance Encounters</i> SE: 8-9, 10-11, 30-31, 32-33, 37, 46, 47 TG: 74
b. Understand and use appropriate vocabulary.	<i>Chance Encounters</i> SE: 9, 11 TG: 24, 30
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.	<i>Getting Down to Business</i> SE: 24-25, 43 <i>The Language of Algebra</i> SE: 16-17, 20-21, 28-29 <i>Making Mathematical Arguments</i> SE: 16-17, 18-19, 22-23, 38, 40 TG: 38, 40
b. Use functional relationships to explain how a change in one quantity results in a change in another.	<i>Getting Down to Business</i> SE: 22-23, 24-25, 43, 44 <i>The Language of Algebra</i> SE: 16-17, 18-19, 22-23, 26-27, 28-29 TG: 4, 48
c. Understand and use appropriate vocabulary.	<i>Getting Down to Business</i> TG: 4 <i>The Language of Algebra</i> TG: 36, 44, 58
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.	<i>Getting Down to Business</i> SE: 8-9, 22-23, 24-25 <i>The Language of Algebra</i> SE: 6-7, 12-13, 16-17, 20-21, 38-41 TG: 2, 38, 50, 56
03. Apply functions to a variety of problems.	
a. Use patterns and functions to represent and solve problems.	<i>The Language of Algebra</i> SE: 12-13, 18-19, 28-29, 30-31, 34-37 <i>Making Mathematical Arguments</i> SE: 30-31, 44