

*Arizona*  
**Academic Standards & Accountability (AIMS)**  
**Mathematics - Grade 4**  
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<b>Benchmark Number</b>	<b>Benchmark</b> • <b>Instructional Targets</b>	<b>Gourmet Resource</b>	<b>Taught</b>	<b>Tested</b>
	<b>Number Sense</b> Students develop number sense and use numbers and number relationships to acquire basic facts, to solve a wide variety of real-world problems, and to determine the reasonableness of results.			
<b>IM-E1</b>	• <i>Read, write, and order integers, whole numbers, and rational numbers.</i>			
<b>PO 1</b>	• <i>Compare and order using concrete or illustrated models</i>	<b>Appetizers 1 B; Main Dish Objective 1 (Number Concepts) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>A</b>	• <i>whole numbers (to millions)</i>	<b>Appetizers 1 B; Main Dish Objective 1 (Number Concepts) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>B</b>	• <i>common fractions (halves, thirds, fourth, eighths)</i>	<b>Appetizers 1 G; Main Dish Objective 1 (Number Concepts) Lesson 7; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>C</b>	• <i>decimals (thousandths)</i>	<b>Appetizers 1 E; Main Dish Objective 1 (Number Concepts) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>PO 2</b>	• <i>Represent place value using concrete or illustrated models</i>	<b>Appetizers 1 C; Main Dish Objective 1 (Number Concepts) Lesson 3; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		

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A	<ul style="list-style-type: none"> <li>whole numbers (millions), decimals (thousandths)</li> </ul>	Appetizers 1 A; Main Dish Objective 1 (Number Concepts) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 3	<ul style="list-style-type: none"> <li>Read and write whole numbers, integers, common fractions, and decimals using real-world situations</li> </ul>	Appetizers 1 A, E, & G; Main Dish Objective 1 (Number Concepts) Lessons 1, 5, & 7; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>whole numbers (millions), decimals (thousandths), fractions (halves, thirds, fourths, eighths)</li> </ul>	Appetizers 1 A, B, E, & G; Main Dish Objective 1 (Number Concepts) Lessons 1, 2, 5, & 7; Applications; Final Tests; Reasonableness Problems; Journal Topics		
IM-E2	<ul style="list-style-type: none"> <li>Relate the basic arithmetic operations to one another (e.g., multiplication and division are inverse operations).</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Represent the process of multiplication as repeated addition, using concrete or illustrative models</li> </ul>	Appetizers 2 A; 8 A; Main Dish Objective (Mathematical Relations) 2; Objective 8 (Multiplication) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>whole numbers</li> </ul>	Appetizers 8 A; Main Dish Objective 8 (Multiplication) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	<ul style="list-style-type: none"> <li>Represent the process of division as repeated subtraction, partitioning a group and partitioning a whole using concrete or illustrative models</li> </ul>	Appetizers 9 A; Main Dish Objective 9 (Division) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>whole numbers</li> </ul>	Appetizers 9 A; Main Dish Objective 9 (Division) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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PO 3	<ul style="list-style-type: none"> <li>Write the family of equations using inverse operations for a given set of numbers</li> </ul>	Appetizers 2 A; Main Dish Objective 2 (Mathematical Relations) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>whole numbers with addition/subtraction (<math>4 + 5 = 9</math>, <math>5 + 4 = 9</math>, <math>9 - 4 = 5</math>, <math>9 - 5 = 4</math>)</li> </ul>	Appetizers 2 A; Main Dish Objective 2 (Mathematical Relations) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
IM-E3	<ul style="list-style-type: none"> <li>Demonstrate proficiency with the operations of multiplication and division of whole numbers.</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Calculate multiplication/division</li> </ul>	Appetizers 8 A and B; 9 A, B, and C; Main Dish Objective 8 (Multiplication) Lessons 1 and 2; Applications; 9 (Division) Lessons 1, 2, and 3; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>three-digit by two-digit to find the product</li> </ul>	Appetizers 8 B; Main Dish Objective 8 (Multiplication) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
B	<ul style="list-style-type: none"> <li>facts through 12</li> </ul>	Appetizers 8 A, B, & C; Main Dish Objective 8 (Multiplication) Lessons 1, 2, & 3; Applications; Final Tests; Reasonableness Problems; Journal Topics		
C	<ul style="list-style-type: none"> <li>mental math and estimation with multiples of 10</li> </ul>	Appetizers 9; 10; Main Dish Objectives 9 (Division); 10 (Estimation); Applications; Final Tests; Reasonableness Problems; Journal Topics		
D	<ul style="list-style-type: none"> <li>one-digit divisor to find quotient with remainder</li> </ul>	Appetizers 9 B & C; Main Dish Objective 9 (Division) Lessons 2 & 3; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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PO 2	<ul style="list-style-type: none"> <li>Calculate multiplication and division problems using contextual situations</li> </ul>	Appetizers 9 C & D; 11 B; 12 A; Main Dish Objectives 9 (Division) Lessons 3 & 4; 11 (Problem Solving) Lesson 2; 12 (Mathematical Representation) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
IM-E4	<ul style="list-style-type: none"> <li>Develop and apply number theory concepts (e.g., primes, factors, and multiples) to represent numbers in various ways.</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>State the factors for a given whole number</li> </ul>	Appetizers 8 A; Main Dish Objective 8 (Multiplication) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 4	<ul style="list-style-type: none"> <li>Sort numbers by their properties</li> </ul>			
A	<ul style="list-style-type: none"> <li>odd, even</li> </ul>	Appetizers 2 F; Main Dish Objective 2 (Mathematical Relations) Lesson 6; Applications; Final Tests; Reasonableness Problems; Journal Topics		
IM-E5	<ul style="list-style-type: none"> <li>Represent and use numbers in equivalent forms (integers, fractions, percent, decimals, exponents, scientific notation, and square roots).</li> </ul>			
PO 2	<ul style="list-style-type: none"> <li>Demonstrate the relationship and equivalency among</li> </ul>	Appetizers 1 H; Main Dish Objective 1 (Number Concepts) Lesson 8; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>decimals, fractions, and percents (e.g., <math>1/2 = 0.5 = 50%</math> with halves, fourths, and tenths)</li> </ul>			
IM-E6	<ul style="list-style-type: none"> <li>Recognize that the degree of precision needed in calculating a number depends on how the results will be used and the instruments used to generate the measurements.</li> </ul>			
PO 2	<ul style="list-style-type: none"> <li>Apply the appropriate strategy (e.g., estimation, approximation, rounding, or exact numbers) when calculating to solve problems</li> </ul>	Appetizers 10 A, B, C, D, & E; Main Dish Objective 10 (Estimation) Lessons 1, 2, 3, 4, & 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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<b>PO 3</b>	• <i>Demonstrate/describe the magnitude of</i>			
<b>A</b>	• <i>whole numbers (e.g., “How many apples in the orchard?”)</i>	<b>Appetizers 10 A; Main Dish Objective 10 (Estimation) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>PO 4</b>	• <i>Interpret calculation and calculator results within a contextual situation</i>	<b>All Appetizers; All Main Dish Objectives; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>Data Analysis and Probability</b> Students use data collection and analysis, statistics, and probability to make valid inferences, decisions, and arguments and to solve a variety of real-world problems.				
<b>2M-E1</b>	• <b><i>Construct, read, analyze, and interpret tables, charts, graphs, and data plots (e.g., box-and-whisker, stem-and-leaf, and scatter plots).</i></b>			
<b>PO 1</b>	• <i>Construct</i>			
<b>A</b>	• <i>bar graphs, line graphs, frequency tables and Venn diagrams</i>	<b>Appetizers 5 C; 12 B; Main Dish Objectives 5 (Probability/Statistics) Lesson 3; 12 (Mathematical Representation) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>PO 2</b>	• <i>Interpret and analyze data from graphical representations and draw simple conclusions</i>	<b>Appetizers 5 C; 12 B; Main Dish Objectives 5 (Probability/Statistics) Lesson 3; 12 (Mathematical Representation) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		
<b>A</b>	• <i>bar graphs, line graphs, frequency tables and Venn diagrams</i>	<b>Appetizers 5 C; 12 B; Main Dish Objectives 5 (Probability/Statistics) Lesson 3; 12 (Mathematical Representation) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics</b>		

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2M-E2	<ul style="list-style-type: none"> <li>• <i>Make valid inferences, predictions, and arguments based on statistical analysis.</i></li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>• <i>Formulate predictions from a given set of data and justify predictions</i></li> </ul>	Appetizers 5 A; Main Dish Objective 5 (Probability/Statistics) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	<ul style="list-style-type: none"> <li>• <i>Compare a given prediction with the results of an investigation</i></li> </ul>	Appetizers 5 A; Main Dish Objective 5 (Probability/Statistics) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
2M-E3	<ul style="list-style-type: none"> <li>• <i>Display and use measures of range and central tendency (i.e., mean, median, and mode).</i></li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>• <i>Find the mean, median, mode, and range of data using concrete and illustrative models</i></li> </ul>	Appetizers 13 C; Main Dish Objective 13 (Reasonableness) Lesson 3; Applications; Final Tests; Reasonableness Problems; Journal Topics		
2M-E4	<ul style="list-style-type: none"> <li>• <i>Use counting strategies to determine all the possible outcomes of a particular event (e.g., the number of ways students can line up to have their pictures taken).</i></li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>• <i>Find all possible outcome sets involving</i></li> </ul>	Appetizers 5 B; Main Dish Objective 5 (Probability/Statistics) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>• <i>two sets of objects (e.g., shirts and pants)</i></li> </ul>	Appetizers 5 B; Main Dish Objective 5 (Probability/Statistics) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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2M-E5	<ul style="list-style-type: none"> <li>Determine probabilities through experiments and/or simulations and compare the results with the mathematical expectation.</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Make predictions from the results of a student-generated experiment (empirical probability)</li> </ul>	Appetizers 5 A; Main Dish Objective 5 (Probability/Statistics) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>single events (e.g., spinners)</li> </ul>	Appetizers 5 A; Main Dish Objective 5 (Probability/Statistics) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 3	<ul style="list-style-type: none"> <li>Describe events that are certain or impossible</li> </ul>	Appetizers 5 A; Main Dish Objective 5 (Probability/Statistics) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 5	<ul style="list-style-type: none"> <li>Identify outcomes that are more likely, less likely, or equally likely to occur</li> </ul>	Appetizers 5 A; Main Dish Objective 5 (Probability/Statistics) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
<p><b>Patterns, Algebra, and Functions</b></p> <p>Students use algebraic methods to explore, model, and describe patterns, relationships, and functions involving numbers, shapes, data, and graphs within a variety of real-world problem-solving situations.</p>				
3M-E1	<ul style="list-style-type: none"> <li>Use algebraic methods (write number sentences, in the form of expressions and equations) to explore, model, and describe patterns and functions involving numbers, shapes, data, graphs, and data plots.</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Extend simple geometric and number patterns (e.g., 1, 1, 2, 1, 1, 3, 1, 1, 4...)</li> </ul>	Appetizers 2 B; Main Dish Objective 2 (Mathematical Relations) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	<ul style="list-style-type: none"> <li>Create simple geometric and number patterns</li> </ul>	Appetizers 2 B; Main Dish Objective 2 (Mathematical Relations) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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PO 3	<ul style="list-style-type: none"> <li>Describe a rule for a simple pattern (e.g., 5, 10, 15, 20... rule = add five or count by fives)</li> </ul>	Appetizers 2 B; Main Dish Objective 2 (Mathematical Relations) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
3M-E2	<ul style="list-style-type: none"> <li>Describe, represent, and analyze patterns and relationships using shapes, tables, graphs, data plots, verbal rules, and standard algebraic notation.</li> </ul>			
3M-E3	<ul style="list-style-type: none"> <li>Describe the concepts of variables, expressions, equations, and inequalities.</li> </ul>			
3M-E4	<ul style="list-style-type: none"> <li>Analyze functional relationships to explain how a change in one variable results in a change in another.</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Describe a real-life situation in which a change in one variable results in the change of the other (e.g., temperature in which the classroom goes up and the amount of clothing goes down)</li> </ul>	Appetizers 13 A & B; Main Dish Objective 13 (Reasonableness) Lessons 1 & 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 3	<ul style="list-style-type: none"> <li>Compute an "output" for a given "input" in a function</li> </ul>	Appetizers 2 B; Main Dish Objective 2 (Mathematical Relations) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
3M-E5	<ul style="list-style-type: none"> <li>Use patterns and functions to represent and solve problems both formally and informally (e.g., measuring the height a ball bounces by dropping different balls from different starting heights).</li> </ul>			
3M-E6	<ul style="list-style-type: none"> <li>Distinguish between linear and nonlinear functions through investigations.</li> </ul>			
3M-E7	<ul style="list-style-type: none"> <li>Solve simple linear equations and inequalities using a variety of methods (e.g., informal, formal, graphical) and a variety of manipulatives.</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Solve equations using</li> </ul>			
A	<ul style="list-style-type: none"> <li>whole numbers with one variable - one step</li> </ul>	Appetizers 2 A; 11 A; 12 A; Main Dish Objectives 2 (Mathematical Relations) Lesson 1; 11 (Problem Solving) Lesson 1; 12 (Mathematical Representation) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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PO 3	<ul style="list-style-type: none"> <li>Graph given data points to represent a linear equation</li> </ul>	Appetizers 5 C; 12 C; Main Dish Objectives 5 (Probability/Statistics) Lesson 3; 12 (Mathematical Representation) Lesson 3; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>on a coordinate grid with whole numbers</li> </ul>	Appetizers 2 D; Main Dish Objective 2 (Mathematical Relations) Lesson 4; Applications; Final Tests; Reasonableness Problems; Journal Topics		
3M-E8	<ul style="list-style-type: none"> <li>Develop, analyze, and explain methods for solving proportions.</li> </ul>			
	<p><b>Geometry</b></p> <p>Students use geometric methods, properties, and relationships as a means to recognize, draw, describe, connect, and analyze shapes and representations in the physical world.</p>			
4M-E1	<ul style="list-style-type: none"> <li>Visualize and draw two- and three-dimensional geometric figures with special attention to analyzing and reasoning informally about their properties (e.g., parallelism, perpendicularity, and congruence).</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Classify two-dimensional shapes and three-dimensional figures by their properties.</li> </ul>	Appetizers 2 A; Main Dish Objective 2 (Mathematical Relations) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>by sight</li> </ul>	Appetizers 3 A; Main Dish Objective 3 (Geometry) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	<ul style="list-style-type: none"> <li>Identify the properties of geometric figures using appropriate terminology and vocabulary (e.g., parallelism, perpendicularity, and congruency)</li> </ul>	Appetizers 3 A & B; Main Dish Objective 3 (Geometry) Lessons 1 & 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>two-dimension shapes (three- and four-sided polygons)</li> </ul>	Appetizers 3 A & B; Main Dish Objective 3 (Geometry) Lessons 1 & 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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PO 3	<ul style="list-style-type: none"> <li>Draw or build two-dimensional shapes by applying significant properties of each (e.g., draw a rectangle with two sets of parallel sides and four right angles)</li> </ul>	Appetizers 3 A, B, & D; Main Dish Objective 3 (Geometry) Lessons 1, 2, & 4; Applications; Final Tests; Reasonableness Problems; Journal Topics		
4M-E2	<ul style="list-style-type: none"> <li>Apply geometric properties and relationships such as congruence, similarity, angle measure, parallelism, and perpendicularity to real-world situations.</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Design or draw a model (e.g., designing a playhouse, garden) that demonstrates basic geometric relationships, such as</li> </ul>			
A	<ul style="list-style-type: none"> <li>parallelism, perpendicularity, similarity</li> </ul>	Appetizers 3 B & D; Main Dish Objective 3 (Geometry) Lessons 2 & 4; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	<ul style="list-style-type: none"> <li>Classify triangles by their angles and sides (e.g., equilateral, acute, isosceles...)</li> </ul>	Appetizers 3 D; Main Dish Objective 3 (Geometry) Lesson 4; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 5	<ul style="list-style-type: none"> <li>Identify lines that are parallel and perpendicular</li> </ul>	Appetizers 3 D; Main Dish Objective 3 (Geometry) Lesson 4; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 6	<ul style="list-style-type: none"> <li>Distinguish shapes that are congruent</li> </ul>	Appetizers 3 B; Main Dish Objective 3 (Geometry) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
4M-E3	<ul style="list-style-type: none"> <li>Perform elementary transformations (e.g., tessellations, flips, slides, rotations).</li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>Demonstrate slide, flip, or turn using concrete geometric figures</li> </ul>	Appetizers 3 C; Main Dish Objective 3 (Geometry) Lesson 3; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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PO 2	<ul style="list-style-type: none"> <li>• <i>Illustrate, using concrete or pictorial models</i></li> </ul>			
A	<ul style="list-style-type: none"> <li>• <i>has symmetry</i></li> </ul>	Appetizers 3 B & C; Main Dish Objective 3 (Geometry) Lessons 2 & 3; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 3	<ul style="list-style-type: none"> <li>• <i>Draw or build a shape that</i></li> </ul>			
A	<ul style="list-style-type: none"> <li>• <i>has symmetry</i></li> </ul>	Appetizers 3 B; Main Dish Objective 3 (Geometry) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
4M-E4	<ul style="list-style-type: none"> <li>• <i>Represent and solve problems relating to size, shape, area, and volume using geometric models.</i></li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>• <i>Solve problems using given formulas for</i></li> </ul>	Appetizers 4 G & H; 11 E; Main Dish Objectives 4 (Measurement) Lessons 7 & 8; 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		
A	<ul style="list-style-type: none"> <li>• <i>simple area and perimeter</i></li> </ul>	Appetizers 4 G & H; 11 E; Main Dish Objectives 4 (Measurement) Lessons 7 & 8; 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	<ul style="list-style-type: none"> <li>• <i>Identify a variety of shapes having the same perimeter and area</i></li> </ul>	Appetizers 4 G & H; 11 E; Main Dish Objectives 4 (Measurement) Lessons 7 & 8; 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		

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	<p><b>Measurement and Discrete Mathematics</b></p> <p>Students make and use direct and indirect measurement, metric and U.S. customary, to describe and compare the real world and to prepare for the study of discrete functions, fractals, and chaos which have evolved out of the age of technology.</p>			
5M-E1	<ul style="list-style-type: none"> <li>• <i>Estimate, make, and use measurements (U.S. customary and metric) to describe and make comparisons.</i></li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>• <i>Measure length, volume, and weight in both U.S. customary and metric units</i></li> </ul>	<p>Appetizers 4 B &amp; C; Main Dish Objective 4 (Measurement) Lessons 2 &amp; 3; Applications; Final Tests; Reasonableness Problems; Journal Topics</p>		
PO 2	<ul style="list-style-type: none"> <li>• <i>Convert measurement units to equivalent units within a given system (customary and metric) (e.g., 12 inches = 1 foot, 10 decimeters = 1 meter)</i></li> </ul>	<p>Appetizers 4 E &amp; F; Main Dish Objective 4 (Measurement) Lessons 5 &amp; 6; Applications; Final Tests; Reasonableness Problems; Journal Topics</p>		
PO 3	<ul style="list-style-type: none"> <li>• <i>Estimate measurements for both U.S. customary and metric units within either system</i></li> </ul>	<p>Appetizers 10; Main Dish Objective 10 (Estimation); Applications; Final Tests; Reasonableness Problems; Journal Topics</p>		
5M-E2	<ul style="list-style-type: none"> <li>• <i>Select and use appropriate units and tools to measure to the degree of accuracy required in a particular problem-solving situation.</i></li> </ul>			
PO 1	<ul style="list-style-type: none"> <li>• <i>State the appropriate tool to measure in a particular situation (e.g., "What tool would you use to measure the top of your desk?")</i></li> </ul>	<p>Appetizers 4 C &amp; D; Main Dish Objective 4 (Measurement) Lessons 3 &amp; 4; Applications; Final Tests; Reasonableness Problems; Journal Topics</p>		
PO 2	<ul style="list-style-type: none"> <li>• <i>State the appropriate unit of measurement in a particular situation (e.g., "What unit of measurement would you use to measure the top of your desk?")</i></li> </ul>	<p>Appetizers 4 C &amp; D; Main Dish Objective 4 (Measurement) Lessons 3 &amp; 4; Applications; Final Tests; Reasonableness Problems; Journal Topics</p>		
PO 3	<ul style="list-style-type: none"> <li>• <i>Measure to the appropriate degree of accuracy to solve problems (e.g., measuring to the nearest sixteenth of an inch or using ounces, measuring to the nearest millimeter or using liters)</i></li> </ul>	<p>Appetizers 4 C &amp; E; Main Dish Objective 4 (Measurement) Lessons 3 &amp; 5; Applications; Final Tests; Reasonableness Problems; Journal Topics</p>		

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5M-E3	• <i>Estimate, use, and describe measures of distance, perimeter, area, volume, capacity, weight, mass, and angles.</i>			
PO 1	• <i>Differentiate between perimeter and area of quadrilaterals using concrete and illustrative models</i>	Appetizers 4 G & H; 11 E; Main Dish Objectives 4 (Measurement) Lessons 7 & 8; 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	• <i>Record estimates and measurements for</i>			
A	• <i>distance</i>	Appetizers 4 C & D; Main Dish Objective 4 (Measurement) Lessons 3 & 4; Applications; Final Tests; Reasonableness Problems; Journal Topics		
C	• <i>perimeter</i>	Appetizers 4 G; Main Dish Objectives 4 (Measurement) Lesson 7; 11 (Problem Solving) Lesson 5 Applications; Final Tests; Reasonableness Problems; Journal Topics		
E	• <i>area</i>	Appetizers 4 H; 11 F; Main Dish Objectives 4 (Measurement) Lesson 8; 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		
G	• <i>weight</i>	Appetizers 4 F Main Dish Objective 4 (Measurement) Lesson 6; Applications; Final Tests; Reasonableness Problems; Journal Topics		
5M-E4	• <i>Develop and use formulas and procedures to solve problems involving measurement.</i>			
PO 1	• <i>Develop a procedure or formula to calculate</i>			
A	• <i>area and perimeter of simple polygons</i>	Appetizers 11 E; Main Dish Objective 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		

<b>Benchmark Number</b>	<b>Benchmark</b> • <b>Instructional Targets</b>	<b>Gourmet Resource</b>	<b>Taught</b>	<b>Tested</b>
PO 2	• Use given formulas to find			
A	• area and perimeter of simple polygons	Appetizers 11 E; Main Dish Objective 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		
5M-E5	• Describe how a change in the linear dimension of an object affects its perimeter, area, and volume.			
PO 1	• Describe the change in perimeter and area when one dimension of an object is altered	Appetizers 4 G & H; 11 E; Main Dish Objectives 4 (Measurement) Lessons 7 & 8; 11 (Problem Solving) Lesson 5; Applications; Final Tests; Reasonableness Problems; Journal Topics		
5M-E6	• Use calculators and computers to perform basic recursive and iterative processes.			
PO 1	• Solve a problem using the iterative process			
A	• doubling (e.g., "If you get paid 1 cent for the first day, 2 cents for the second day, each day doubling the previous day's pay, how much would you get paid on the twentieth day?")	Appetizers 2 B; Main Dish Objective 2 (Mathematical Relations) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
PO 2	• Generate the iterative sequence for the next six terms when given the first four terms (e.g., 4, 7, 10, 13, ...)	Appetizers 2 B; Main Dish Objective 2 (Mathematical Relations) Lesson 2; Applications; Final Tests; Reasonableness Problems; Journal Topics		
<p><b>Mathematical Structure/Logic</b></p> <p>Students use both inductive and deductive reasoning as they make conjectures and test the validity of arguments.</p>				
6M-E1	• Use models to explain how ratios, proportions, and percents can be used to solve problems and apply reasoning processes, such as spatial reasoning and reasoning with proportions and graphs.			
6M-E2	• Construct, use, and explain algorithmic procedures for computing and estimating with whole numbers, fractions, decimals, and integers.			

<b>Benchmark Number</b>	<b>Benchmark</b> • <b>Instructional Targets</b>	<b>Gourmet Resource</b>	<b>Taught</b>	<b>Tested</b>
<b>PO 1</b>	<ul style="list-style-type: none"> <li>Design a method with a series of defined steps for solving a problem; justify the method</li> </ul>	Appetizers 11 A & B; 12 A; Main Dish Objective 11 (Problem Solving) Lessons 1 & 2; Objective 12 Mathematical Representation) Lesson 1; Applications; Final Tests; Reasonableness Problems; Journal Topics		
<b>A</b>	<ul style="list-style-type: none"> <li>whole numbers</li> </ul>	Appetizers 11 A, B, C, D, E, & F; Main Dish Objective 11 (Problem Solving) Lessons 1, 2, 3, 4, 5, & 6; Applications; Final Tests; Reasonableness Problems; Journal Topics		
<b>6M-E3</b>	<ul style="list-style-type: none"> <li>Use <i>if...then</i> statements to construct valid arguments</li> </ul>			
<b>PO 1</b>	<ul style="list-style-type: none"> <li>Construct simple valid arguments using <i>if...then</i> statements based on</li> </ul>			
<b>A</b>	<ul style="list-style-type: none"> <li>graphic organizers (e.g., Venn diagrams and pictures...)</li> </ul>	Appetizers 5; Main Dish Objective 5 (Probability/Statistics); Applications; Final Tests; Reasonableness Problems; Journal Topics		
<b>B</b>	<ul style="list-style-type: none"> <li>geometric shapes</li> </ul>	Appetizers 3; Main Dish Objective 3 (Geometry); Applications; Final Tests; Reasonableness Problems; Journal Topics		