



		<b>B1</b> <i>Number Sense, Addition &amp; Subtraction</i> Student Book Skill Builders (SB)	<b>B2</b> <i>Multiplication &amp; Division Basic Facts</i> Student Book Skill Builders (SB)	<b>B3</b> <i>Multiplication &amp; Division - Problem Solving</i> Student Book Skill Builders (SB)	<b>B4</b> <i>Fractions, Decimals, Geometry, Measurement</i> Student Book Skill Builders (SB)
<b>PO.1</b>	Add and subtract whole numbers to four digits.	32-37, 49-51, 71-75 <b>SB:</b> 10-9, 10-10, 12-1, 15-8, 15-9, 17-1			
<b>PO.2</b>	Create and solve word problems based on addition, subtraction, multiplication, and division.	52-54, 63-65 <b>SB:</b> 10-13, 15-13, 15-14, 15-18	33-38, 72 <b>SB:</b> 20-2, 26-6	2, 10, 60 <b>SB:</b> 20-22	
<b>PO.3</b>	Demonstrate the concept of multiplication and division using multiple models.		2, 3, 8, 9, 21-24 <b>SB:</b> 20-1, 25-1, 25-2	2, 3, 5, 41-44 <b>SB:</b> 20-22, 25-19	
<b>PO.4</b>	Demonstrate fluency of multiplication and division facts through 10.		18, 20, 40 <b>SB:</b> 20-8	7, 13, 57 <b>SB:</b> 20-24, 20-30, 25-23, 25-26	
<b>PO.5</b>	Apply and interpret the concept of multiplication and division as inverse operations to solve problems.		26, 32 <b>SB:</b> 25-4, 25-7	44, 49 <b>SB:</b> 25-20, 25-24	
<b>PO.6</b>	Describe the effect of operations (multiplication and division) on the size of whole numbers		2, 12, 23, 24	2, 7, 41, 47 <b>SB:</b> 20-19, 25-21	
<b>PO.7</b>	Apply commutative, identity, and zero properties to multiplication and apply the identity property to division.		10, 13, 29 <b>SB:</b> 20-6, 20-9, 25-5	4, 6, 45 <b>SB:</b> 20-21, 20-23, 25-17	
	<b>Concept 3: Estimation</b>				
<b>PO.1</b>	Make estimates appropriate to a given situation or computation with whole numbers.	60, 61 <b>SB:</b> 10-14, 15-16	59 <b>SB:</b> 21-2	23, 24 <b>SB:</b> 21-6, 21-7, 26-13	
	<b>STRAND 2: DATA ANALYSIS, PROBABILITY, AND DISCRETE MATHEMATICS</b>				

		<b>B1</b> <i>Number Sense, Addition &amp; Subtraction</i> Student Book Skill Builders (SB)	<b>B2</b> <i>Multiplication &amp; Division Basic Facts</i> Student Book Skill Builders (SB)	<b>B3</b> <i>Multiplication &amp; Division - Problem Solving</i> Student Book Skill Builders (SB)	<b>B4</b> <i>Fractions, Decimals, Geometry, Measurement</i> Student Book Skill Builders (SB)
	<b>Concept 1: Data Analysis (Statistics)</b>				
<b>PO.1</b>	Collect, record, organize, and display data using frequency tables, single bar graphs, or single line graphs.	68 SB: 50-4	46		
<b>PO.2</b>	Formulate and answer questions by interpreting and analyzing displays of data, including frequency tables, single bar graphs, or single line graphs.	68-70 SB: 50-1, 50-3	46, 49, 58 SB: 50-5, 50-6		
	<b>Concept 2: Probability</b>				
	No performance objectives at this grade level.				
	<b>Concept 3: Systematic Listing and Counting</b>				
<b>PO.1</b>	Represent all possibilities for a variety of counting problems using arrays, charts, and systematic lists; draw conclusions from these representations.				
<b>PO.2</b>	Solve a variety of problems based on the multiplication principle of counting.				
	<b>Concept 4: Vertex-Edge Graphs</b>				
<b>PO.1</b>	Color complex maps using the least number of colors and justify the coloring.				
<b>PO.2</b>	Investigate properties of vertex-edge graphs				
	• circuits in a graph,				
	• weights on edges, and				
	• shortest path between two vertices.				
<b>PO.3</b>	Solve problems using vertex-edge graphs.				

		B1 <i>Number Sense, Addition &amp; Subtraction</i> Student Book Skill Builders (SB)	B2 <i>Multiplication &amp; Division Basic Facts</i> Student Book Skill Builders (SB)	B3 <i>Multiplication &amp; Division - Problem Solving</i> Student Book Skill Builders (SB)	B4 <i>Fractions, Decimals, Geometry, Measurement</i> Student Book Skill Builders (SB)
	<b>STRAND 3: PATTERNS, ALGEBRA, AND FUNCTIONS</b>				
	<b>Concept 1: Patterns</b>				
<b>PO.1</b>	Recognize, describe, extend, create, and find missing terms in a numerical sequence.	10, 11, 14 SB: 3-2			
<b>PO.2</b>	Explain the rule for a given numerical sequence and verify that the rule works.	10 SB: 3-2	43		
	<b>Concept 2: Functions and Relationships</b>				
<b>PO.1</b>	Recognize and describe a relationship between two quantities, given by a chart, table or graph, in which the quantities change proportionally, using words, pictures, or expressions.	11, 13	17 SB: 20-11, 25-8	14, 15 SB: 20-31	
<b>PO.2</b>	Translate between the different representations of whole number relationships, including symbolic, numerical, verbal or pictorial.	13		14, 15 SB: 20-31	
	<b>Concept 3: Algebraic Representations</b>				
<b>PO.1</b>	Record equivalent forms of whole numbers to six digits by constructing models and using numbers.	15, 17 SB: 4-1, 6-3			
<b>PO.2</b>	Use a symbol to represent an unknown quantity in a given context.	38, 52, 53, 65 SB: 15-18, 19-2	69, 77 SB: 24-1	39, 40 SB: 24-3	
<b>PO.3</b>	Create and solve simple one-step equations that can be solved using addition and multiplication facts.	38 SB: 14-2	19 SB: 20-18	40 SB: 24-3	
	<b>Concept 4: Analysis of Change</b>				
	No performance objectives at this grade level.				

		B1 <i>Number Sense, Addition &amp; Subtraction</i> Student Book Skill Builders (SB)	B2 <i>Multiplication &amp; Division Basic Facts</i> Student Book Skill Builders (SB)	B3 <i>Multiplication &amp; Division - Problem Solving</i> Student Book Skill Builders (SB)	B4 <i>Fractions, Decimals, Geometry, Measurement</i> Student Book Skill Builders (SB)
	<b>STRAND 4: GEOMETRY AND MEASUREMENT</b>				
	<b>Concept 1: Geometric Properties</b>				
<b>PO.1</b>	Describe sequences of 2-dimensional figures created by increasing the number of sides, changing size, or changing orientation.				
<b>PO.2</b>	Recognize similar figures.				
<b>PO.3</b>	Identify and describe 3-dimensional figures including their relationship to real world objects: sphere, cube, cone, cylinder, pyramids, and rectangular prisms.			47, 48	
<b>PO.4</b>	Describe and compare attributes of two- and three-dimensional figures.			48	
	<b>Concept 2: Transformation of Shapes</b>				
<b>PO.1</b>	Identify a translation, reflection, or rotation and model its effect on a 2-dimensional figure.				45
<b>PO.2</b>	Identify, with justification, all lines of symmetry in a 2-dimensional figure.				41, 42
	<b>Concept 3: Coordinate Geometry</b>				
	No performance objectives at this grade level.				
	<b>Concept 4: Measurement</b>				
<b>PO.1</b>	Determine elapsed time				
	• across months using a calendar				
	• by hours and half hours using a clock.				51

		B1 Number Sense, Addition & Subtraction Student Book Skill Builders (SB)	B2 Multiplication & Division Basic Facts Student Book Skill Builders (SB)	B3 Multiplication & Division - Problem Solving Student Book Skill Builders (SB)	B4 Fractions, Decimals, Geometry, Measurement Student Book Skill Builders (SB)
<b>PO.2</b>	Apply measurement skills to measure length, weight, and capacity using US Customary units.				56, 59-61
<b>PO.3</b>	Convert units of length, weight, and capacity				
	<ul style="list-style-type: none"> <li>inches or feet to yards,</li> <li>ounces to pounds, and</li> <li>cups to pints, pints to quarts, quarts to gallons.</li> </ul>				59 60 61 68
<b>PO.4</b>	Determine the area of a rectangular figure using an array model.				
<b>PO.5</b>	Measure and calculate perimeter of 2-dimensional figures.				65
	<b>STRAND 5: STRUCTURE AND LOGIC</b>				
	<b>Concept 1: Algorithms and Algorithmic Thinking</b>				
	No performance objectives at this grade level.				
	<b>Concept 2: Logic, Reasoning, Problem Solving, and Proof</b>				
<b>PO.1</b>	Analyze a problem situation to determine the question(s) to be answered.	38, 52, 53	34	25, 51	
<b>PO.2</b>	Identify relevant information related to the solution to a problem.	54	34, 38	25, 51	
<b>PO.3</b>	Select and use one or more strategies to efficiently solve the problem and justify the selection.	67	33, 36, 37	51, 76	
<b>PO.4</b>	Determine whether a problem to be solved is similar to previously solved problems, and identify possible strategies for solving the problem.	33	48, 60	74	

		<b>B1</b> <i>Number Sense, Addition &amp; Subtraction</i> Student Book Skill Builders (SB)	<b>B2</b> <i>Multiplication &amp; Division Basic Facts</i> Student Book Skill Builders (SB)	<b>B3</b> <i>Multiplication &amp; Division - Problem Solving</i> Student Book Skill Builders (SB)	<b>B4</b> <i>Fractions, Decimals, Geometry, Measurement</i> Student Book Skill Builders (SB)
<b>PO.5</b>	Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols.	38	33, 37	61	
<b>PO.6</b>	Summarize mathematical information, explain reasoning, and draw conclusions.	Sum-It-Up Throughout	Sum-It-Up Throughout	Sum-It-Up Throughout	
<b>PO.7</b>	Analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question.	63	72 (T.G.)	24, 34	
<b>PO.8</b>	Make and test conjectures based on data (or information) collected from explorations and experiments.	66, 77 <b>SB:</b> 3-1	7, 46	77	



# Math Teachers Press, Inc.

4850 Park Glen Road, Minneapolis, MN 55416  
 phone (800) 852-2435 fax (952) 546-7502

## Arizona Mathematics Standards Correlated to Moving with Math Foundations Grade 4

	B1 Number Sense, Addition & Subtraction Student Book Skill Builders (SB)	B2 Multiplication & Division Basic Facts Student Book Skill Builders (SB)	B3 Multiplication & Division - Problem Solving Student Book Skill Builders (SB)	B4 Fractions, Decimals, Geometry, Measurement Student Book Skill Builders (SB)
<b>STRAND 1: NUMBER AND OPERATIONS</b>				
<b>Concept 1: Number sense</b>				
<b>PO.1</b> Express whole numbers, fractions, decimals, and percents using and connecting multiple representations.	3, 4, 15 SB: 4-1			
<b>PO.2</b> Compose and decompose whole numbers using factors and multiples.		16	37, 38 SB: 25-15, 25-28	
<b>PO.3</b> Express fractions as fair sharing, parts of a whole, parts of a set, and locations on a real number line.				2-10 SB: 30-1 to 30-3,
<b>PO.4</b> Compare and order decimals to hundredths.				28
<b>PO.5</b> Use simple ratios to describe problems in context.				
<b>Concept 2: Numerical Operations</b>				



	B1 Number Sense, Addition & Subtraction Student Book Skill Builders (SB)	B2 Multiplication & Division Basic Facts Student Book Skill Builders (SB)	B3 Multiplication & Division – Problem Solving Student Book Skill Builders (SB)	B4 Fractions, Decimals, Geometry, Measurement Student Book Skill Builders (SB)
<b>PO.1</b> Add and subtract decimals through hundredths	58			17
<b>PO.2</b> Use multiple strategies to multiply whole numbers				
• two-digit by two-digit and			31-33 SB: 23-1, 23-2	
• multi-digit by one-digit.		57 SB: 21-1	26-29 SB: 21-8, 21-9, 21-13	
<b>PO.3</b> Demonstrate fluency of multiplication and division facts through 12.		20, 39, 40 SB: 20-8, 25-13	7, 13, 65 SB: 20-24, 20-30, 20-34, 25-23, 25-	
<b>PO.4</b> Use multiple strategies to divide whole numbers.		24, 27, 28 SB: 25-1 to 25-4	57, 59, 61 SB: 25-19, 26-9, 26-10	
<b>PO.5</b> Apply associative and distributive properties to solve multiplication and division problems.		54 SB: 20-17	16, 22 SB: 20-32, 23-4	
<b>PO.6</b> Apply order of operations with whole numbers.				
<b>PO.1</b> Use benchmarks as meaningful points of comparison for whole numbers, decimals, and fractions.	26 SB: 6-3			
<b>PO.2</b> Make estimates appropriate to a given situation or computation with whole numbers and fractions.	60, 61 SB: 10-14, 15-16	59 SB: 21-2	23, 24 SB: 21-6, 21-7, 26-13	

	B1 Number Sense, Addition & Subtraction Student Book Skill Builders (SB)	B2 Multiplication & Division Basic Facts Student Book Skill Builders (SB)	B3 Multiplication & Division - Problem Solving Student Book Skill Builders (SB)	B4 Fractions, Decimals, Geometry, Measurement Student Book Skill Builders (SB)
	<b>STRAND 2: DATA ANALYSIS, PROBABILITY, AND STATISTICS</b>			
	<b>Concept 1: Data Analysis (Statistics)</b>			
<b>PO.1</b>	Collect, record, organize, and display data using double bar graphs, single line graphs, or circle graphs.			
<b>PO.2</b>	Formulate and answer questions by interpreting and analyzing displays of data, including double bar graphs, single line graphs, or circle graphs.			
<b>PO.3</b>	Use median, mode, and range to describe the data.		68	
<b>PO.4</b>	Compare two sets of related data.			
	<b>Concept 2: Probability</b>			
<b>PO.1</b>	Describe elements of theoretical probability by listing or drawing all possible outcomes of a given event and predicting the outcome using word and number benchmarks.			71
	<b>Concept 3: Systematic Listing and Counting</b>			
<b>PO.1</b>	Construct tree diagrams to solve problems in			
	<ul style="list-style-type: none"> <li>representing all possibilities for a variety of counting problems,</li> <li>explaining how its properties relate to the problem,</li> <li>representing the same counting problem in multiple</li> </ul>			

		B1 Number Sense, Addition & Subtraction Student Book Skill Builders (SB)	B2 Multiplication & Division Basic Facts Student Book Skill Builders (SB)	B3 Multiplication & Division - Problem Solving Student Book Skill Builders (SB)	B4 Fractions, Decimals, Geometry, Measurement Student Book Skill Builders (SB)
	<ul style="list-style-type: none"> <li>drawing conclusions.</li> </ul>				
	PO.2 Justify that all possibilities have been enumerated				
	<b>Concept 4: Vertex-Edge Graphs</b>				
	PO.1 Demonstrate the connection between map coloring				
	PO.2 Construct vertex-edge graphs to represent concrete				
	PO.3 Solve conflict problems by constructing and coloring vertex-edge graphs.				
	<b>STRAND 3: PATTERNS, ALGEBRA, AND FUNCTIONS</b>				
	<b>Concept 1: Patterns</b>				
	PO.1 Recognize, describe, create, extend, and find missing terms in a numerical sequence involving whole numbers using all four basic operations.	10, 11, 14 SB: 3-2			
	PO.2 Explain the rule for a given numerical sequence, verify that the rule works, and use the rule to make predictions.	10 SB: 3-2	43	SB: 20-31	
	<b>Concept 2: Functions and Relationships</b>				
	Moved to grade 2				
	<b>Concept 3: Algebraic Representations</b>				

	<b>B1</b> <i>Number Sense, Addition &amp; Subtraction</i> Student Book Skill Builders (SB)	<b>B2</b> <i>Multiplication &amp; Division Basic Facts</i> Student Book Skill Builders (SB)	<b>B3</b> <i>Multiplication &amp; Division - Problem Solving</i> Student Book Skill Builders (SB)	<b>B4</b> <i>Fractions, Decimals, Geometry, Measurement</i> Student Book Skill Builders (SB)
<b>PO.1</b>	Use a symbol to represent an unknown quantity in a simple algebraic expression involving all operations.	69, 77 SB: 24-1	39, 40 SB: 24-3	
<b>PO.2</b>	Create and solve one-step equations that can be	19	40	
	<b>Concept 4: Analysis of Change</b>			
<b>PO.1</b>	Identify the change in a quantity over time and			
	<b>STRAND 4: GEOMETRY AND MEASUREMENT</b>			
	<b>Concept 1: Geometric Properties</b>			
<b>PO.1</b>	Draw and describe the relationships between points, lines, line segments, rays, and angles including parallelism and perpendicularity.			29-33
<b>PO.2</b>	Justify which objects in a collection match a given geometric description.			
<b>PO.3</b>	Describe and classify triangles by angles and sides.			
<b>PO.4</b>	Recognize which attributes (such as shape or area)			40
<b>PO.5</b>	Recognize and draw congruent figures, and match them in a given collection.			44
<b>PO.6</b>	Draw right, acute, obtuse, and straight angles and identify these angles in other geometric figures.			31
<b>PO.7</b>	Recognize the relationship between a 3-dimensional figure and its corresponding net(s).			48
	<b>Concept 2: Transformation of Shapes</b>			

		B1 Number Sense, Addition & Subtraction Student Book Skill Builders (SB)	B2 Multiplication & Division Basic Facts Student Book Skill Builders (SB)	B3 Multiplication & Division - Problem Solving Student Book Skill Builders (SB)	B4 Fractions, Decimals, Geometry, Measurement Student Book Skill Builders (SB)
	Removed				
	<b>Concept 3: Coordinate Geometry</b>				
<b>PO.1</b>	Name, locate, and graph points in the first quadrant	12, 13			
<b>PO.2</b>	Plot line segments in the first quadrant of the	13			
<b>PO.3</b>	Construct geometric figures with vertices at points on the coordinate plane.				
	<b>Concept 4: Measurement</b>				
<b>PO.1</b>	Compute elapsed time to the minute.				51
<b>PO.2</b>	Apply measurement skills to measure length, mass,				62-64
<b>PO.3</b>	Solve problems involving conversions within the same measurement system.				59-61
<b>PO.4</b>	Solve problems involving perimeter of 2-dimensional figures and areas of rectangles.				65
<b>PO.5</b>	Describe the change in perimeter or area when one attribute (length or width) of a rectangle changes.				67
	<b>STRAND 5: STRUCTURE AND LOGIC</b>				22222
	<b>Concept 1: Algorithms and Algorithmic Thinking</b>				
<b>PO.1</b>	Analyze common algorithms for computing (adding, subtracting, multiplying, and dividing) with whole numbers using the associative, commutative, and distributive properties	27, 28 SB: 9-1, 9-2	54 SB: 20-6, 20-17	6, 16 SB: 20-23, 20-32	

		<b>B1</b> <i>Number Sense, Addition &amp; Subtraction</i> Student Book Skill Builders (SB)	<b>B2</b> <i>Multiplication &amp; Division Basic Facts</i> Student Book Skill Builders (SB)	<b>B3</b> <i>Multiplication &amp; Division - Problem Solving</i> Student Book Skill Builders (SB)	<b>B4</b> <i>Fractions, Decimals, Geometry, Measurement</i> Student Book Skill Builders (SB)
	<b>Concept 2: Logic, Reasoning, Problem Solving, and Proof</b>				
<b>PO.1</b>	Analyze a problem situation to determine the question(s) to be answered.	38, 52, 53	34	25, 51	
<b>PO.2</b>	Identify relevant, missing, and extraneous information related to the solution to a problem.	54	34, 38	25, 51	
<b>PO.3</b>	Select and use one or more strategies to efficiently solve the problem and justify the selection.	67	33, 36, 37	51, 76	
<b>PO.4</b>	Determine whether a problem to be solved is similar to previously solved problems and identify possible strategies for solving the problem.	33	48, 60	74	
<b>PO.5</b>	Represent a problem situation using any combination of words, numbers, pictures, physical objects, or drawings.	38	33, 37	61	
<b>PO.6</b>	Summarize mathematical information, explain reasoning, and draw conclusions.	Sum-It-Up throughout	Sum-It-Up throughout	Sum-It-Up throughout	
<b>PO.7</b>	Analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question.	63	72 (T.G.)	24, 34	
<b>PO.8</b>	Make and test conjectures based on data (or information) collected from explorations and experiments.	66, 77 <b>SB: 3-1</b>	7, 46	77	