

MATH AT HAND © 2004

correlated to

**New Mexico Mathematics Content Standards,
Benchmarks, and Performance Standards
Grades 5-6**



EDUCATION GROUP

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YOUR NEW MEXICO GREAT SOURCE REPRESENTATIVE

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Publisher: Great Source Education Group

Title: Math At Hand

ISBN: 0-669-50817-9

NEW MEXICO MATHEMATICS CONTENT STANDARDS, BENCHMARKS, & PERFORMANCE STANDARDS
Publisher Alignment Analyses for Primary Tool of Instruction

This correlation table/matrix is a tool to show alignment with New Mexico's Content Standards, Benchmarks, & Performance Standards and the proposed instructional material considered for adoption. The purpose is to demonstrate how your material can contribute to student achievement as measured against these Content Standards.

Attach a completed copy of this document to each core basal sample you are submitting for review. You will submit 3 copies of each student & teacher edition for each title & other material deemed necessary to provide appropriate instruction, along with these alignment documents at the 2006 June Summer Institute. DO NOT SEND WITH THE RFP.

Mathematics Grade 5

Standard 1: NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	1. Compare and order using concrete or illustrated models: <ul style="list-style-type: none">• whole numbers (to millions)• common fractions (halves, thirds, fourths, eighths)• decimals (thousandths)	8-10, 16-18, 38-42	
	2. Demonstrate understanding of the magnitude of the value of numbers from thousandths to millions, including common fractions.	5, 29-33	

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A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	3. Represent place value using concrete or illustrated models up to one billion (1,000,000,000).	4-5, 12	
	4. Interpret percents as part of a hundred (i.e., find decimal and percent equivalents for common fractions, explain how they represent the same value, and compute a given percent of a whole number).	20, 44, 189-190	
	5. Identify and represent on a number line decimals, fractions, and mixed numbers.	15, 31, 40	
	6. Identify prime and composite numbers to 50.	53-55	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Understand the meaning of operations and how they relate to one another.	1. Explain and perform whole number division and express remainders as a whole number or a fractional part as appropriate to the context of real-life problems.	89-92144, 146-151	
	2. Add and subtract decimals.	125-126, 125	
	3. Add and subtract fractions and mixed numbers without regrouping and express answers in simplest form.	157-161, 162-166	
	4. Find the factors and multiples of whole numbers.	51-52, 56-58, 59-61	
	5. Use arithmetic operations and inverse relationships to represent and solve real-world problems.	76, 80, 82, 87, 123, 128, 134, 145, 152	

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B. Understand the meaning of operations and how they relate to one another.	6. Identify and represent on a number line decimals, fractions, and mixed numbers.	15, 31, 40	
	7. Demonstrate proficiency with division, including one-and two-digit divisors.	89-92, 144-152	
	8. Solve simple problems involving the addition and subtraction of fractions and mixed numbers.	157-161, 162-166	
	9. Represent and use fractions and decimals in equivalent forms.	15, 35, 43, 483	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Compute fluently and make reasonable estimates.	1. Add, subtract, multiply, and divide whole numbers.	73-77, 78-82, 83-88, 89-92, 118-124, 129-134, 137-141, 146-152	
	2. Add and subtract decimals.	125-126, 135	
	3. Use estimation strategies to verify the reasonableness of calculated results.	93-116, 413-414	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Compute fluently and make reasonable estimates.	4. Explain how the estimation strategy impacts the result.	The opportunity to address this objective is available on the following pages: 93-116, 413-414	
	5. Relate the basic arithmetic operations to one another (e.g., multiplication and division are inverse operations).	76, 80, 82, 123, 128, 134, 145, 152	
	6. Simplify numerical expressions using order of operations.	212-214	
	7. Recognize and explain the differences between exact and approximate values.	The opportunity to address this objective is available on the following pages: 93-116, 413-414	

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Mathematics Grade 5

Standard 2: ALGEBRA: Students will understand algebraic concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Understand patterns, relations, and functions.	1. Identify and graph ordered pairs in the first quadrant of the coordinate plane.	265-266	
	2. Describe, represent, and analyze patterns and relationships.	62, 63, 65, 67, 82, 85, 91, 92, 210, 381, 401-402, 493-498	
	3. Identify, describe, and continue patterns presented in a variety of formats (e.g., numeric, visual, oral, written, kinesthetic, pictorial).	63, 65, 67, 82, 85, 91, 92, 210, 381, 401-402, 493-498	
	4. Generate a pattern using a written description.	The opportunity to address this objective is available on the following pages: 65, 67, 381, 401-402	

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Mathematics Grade 5

Standard 2: ALGEBRA: Students will understand algebraic concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Represent and analyze mathematical situations and structures using algebraic symbols.	1. Compute the value of the expression for specific numerical values of the variable.	237-239	
	2. Use a letter to represent an unknown number.	235-246	
	3. Understand the differences between the symbols for “less than”, “less than or equal to”, “greater than”, and “greater than or equal to”.	8, 10, 16, 18, 38-42, 47, 191, 514	

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Standard 2: ALGEBRA: Students will understand algebraic concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Use mathematical models to represent and understand quantitative relationships.	1. Use mathematical models to represent and explain mathematical concepts and procedures.	The opportunity to address this objective is available throughout the text.	
	2. Understand and use mathematical models such as: <ul style="list-style-type: none">• the number line to model the relationship between rational numbers and rational number operations• pictorial representation of addition and subtraction of rational numbers with regrouping• manipulatives or pictures to model computational procedures• graphs, tables, and charts to describe data• diagrams or pictures to model problem situations	The opportunity to address this objective is available throughout the text.	
	3. Demonstrate how a situation can be represented in more than one way.	6-7, 15, 19, 20, 35, 37, 43-44, 56, 65, 411, 412	

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Standard 2: ALGEBRA: Students will understand algebraic concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
D. Analyze changes in various contexts.	1. Recognize and create patterns of change from everyday life using numerical or pictorial representations.	The opportunity to address this objective is available on the following pages: 277-278, 401-402	
	2. Generalize patterns of change and recognize the same general patterns presented in different representations.	The opportunity to address this objective is available on the following pages: 277-278, 401-402	

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Standard 3: GEOMETRY: Students will understand geometric concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.	1. Identify, describe, and classify two-dimensional shapes and three-dimensional figures by their properties.	356-367, 382-392	
	2. Recognize and describe properties of regular polygons having up to ten sides.	356-367	
	3. Identify faces, edges, and bases on three-dimensional objects.	382-391	
B. Specify locations and describe spatial relationships using coordinate geometry and other representational systems.	1. Recognize perpendicular and parallel lines.	340-342	
C. Apply transformations and use symmetry to analyze mathematical situations.	1. Identify line of symmetry in simple geometric figures.	380	

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Standard 3: GEOMETRY: Students will understand geometric concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
D. Use visualization, spatial reasoning, and geometric modeling to solve problems.	1. Understand and compute the perimeter of regular polygons.	295-297	
	2. Identify and explain circumference, radius, and diameter.	298-, 367, 392	

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Standard 4: MEASUREMENT: Students will understand measurement systems and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Understand measurable attributes of objects and the units, systems, and process of measurement.	1. Understand properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each using both U.S. customary and metric systems.	294-297, 299-305, 309-312, 313-315, 316-318, 485-487	
	2. Select and use appropriate units and tools to measure according to the degree of accuracy required in a particular problem-solving situation.	294-297, 299-305, 309-312, 313-315, 316-318, 485-487	
	3. Solve problems involving linear measurement, weight, and capacity (e.g., measuring to the nearest sixteenth of an inch or nearest millimeter; using ounces, milliliters, or pounds and kilograms) to the appropriate degree of accuracy.	294, 313-315, 316-318	
	4. Perform one-step conversions within a system of measurement (e.g., inches to feet, centimeters to meters).	294, 299, 314-315, 317-318, 327, 329-331, 485-487	

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Standard 4: MEASUREMENT: Students will understand measurement systems and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Apply appropriate techniques, tools, and formulas to determine measurements.	1. Solve measurement problems using appropriate tools involving length, perimeter, weight, capacity, time, and temperature.	294-297, 299-305, 309-312, 313-315, 316-318, 465-468	
	2. Select and use strategies to estimate measurements including length, distance, capacity, and time.	The opportunity to address this objective is available on the following pages: 102, 108, 294, 314-315, 318, 414, 487	
	3. Apply strategies and use tools for estimating and measuring the perimeter of regular and irregular shapes.	The opportunity to address this objective is available on the following pages: 294-297	

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Standard 5: DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	1. Construct, read, analyze, and interpret tables, charts, graphs, and data plots.	245, 267-284, 400, 403, 407	
	2. Construct, interpret, and analyze data from graphical representations and draw simple conclusions using bar graphs, line graphs, circle graphs, frequency tables, and Venn diagrams.	245, 267-284, 400, 403, 407	
	3. Display, analyze, compare, and interpret different data sets, including data sets of different sizes.	267, 272-276, 281-284, 403	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	4. Organize and display single-variable data in appropriate graphs and representations.	245, 269-271, 277-278, 400, 407	
	5. Organize, read, and display numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including correct titles, labels, and intervals or categories including: <ul style="list-style-type: none">• frequency tables• stem and leaf plots• bar, line, and circle graphs• Venn diagrams• pictorial displays• charts and tables	267-268, 272-276, 277-282, 283-284, 400, 403	
	6. Formulate questions and identify data to be collected to correctly answer a question.	248-254, 400, 403, 407, 416	

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Standard 5: DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Select and use appropriate statistical methods to analyze data.	1. Organize and display single-variable data in appropriate graphs and representations and determine which types of graphs are appropriate for various data sets.	245, 269-271, 277-278, 400, 407	
	2. Use fractions and percentages to compare data sets of different sizes.	The opportunity to address this objective is available on the following pages: 178-180, 191	
	3. Correctly rank the values of a numerical data set containing simple fractions and decimals, identify maximum and minimum data values, and calculate the range for a data set.	256	

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Standard 5: DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Develop and evaluate inferences and predictions that are based on data.	1. Make and justify valid inferences, predictions, and arguments based on statistical analysis.	The opportunity to address this objective is available on the following pages: 267-268, 272-284, 286-292	
	2. Compare a given prediction with the results of an investigation.	The opportunity to address this objective is available on the following pages: 286-292	
	3. Use counting strategies to determine all the possible outcomes of a particular familiar event.	287-292	
	4. Find all possible outcome sets involving four or more sets of objects.	287, 291-292	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Develop and evaluate inferences and predictions that are based on data.	5. Evaluate the reasonableness of inferences that are based on data in the context of the original solution.	The opportunity to address this objective is available on the following pages: 287-292, 413	
	6. Identify the method used to make an inference and/or a prediction on a given data set and solve similar problems.	The opportunity to address this objective is available on the following pages: 287-292, 413	
	7. Determine the accuracy of a prediction or an inference based on the accuracy of the data in a given data set.	The opportunity to address this objective is available on the following pages: 287-292, 413	
	8. List all possible outcomes of simple events.	286-292, 411	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
D. Understand and apply basic concepts of probability.	1. Determine probabilities through experiments and/or simulations and compare the results with mathematical expressions.	286-292	
	2. Make predictions from the results of student-generated experiments of single events.	The opportunity to address this objective is available on the following pages: 286-292	
	3. Identify simple experiments where the probabilities of all outcomes are equal.	The opportunity to address this objective is available on the following pages: 286-292	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
D. Understand and apply basic concepts of probability.	4. Describe and predict the results of a probability experiment.	286-292	
	5. Use fractions to describe the results of an experiment.	287	
	6. Use probability to generalize from a simple pattern or set of examples and justify why the generalization is reasonable.	The opportunity to address this objective is available on the following pages: 286-292	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	1. Compare and order rational numbers.	8-10, 16-18, 38-42, 47-48, 178-179, 181	
	2. Use equivalent representations for rational numbers (e.g., integers, decimals, fractions, percents, ratios, numbers with whole-number exponents).	15, 20, 35, 43, 44, 65, 190, 194, 483	

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Standard 1: NUMBER AND OPERATIONS: Students will understand numerical concepts and mathematical operations.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	3. Use appropriate representations of positive rational numbers in the context of real-life applications.	The opportunity to address this objective is available on the following pages: 2-27, 396-408	
	4. Identify greatest common factor and least common multiples for a set of whole numbers.	58, 61	
	5. Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.	15, 31, 40, 45-48, 200	

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B. Understand the meaning of operations and how they relate to one another.	1. Calculate multiplication and division problems using contextual situations.	136-143, 144-155, 168-170, 171-176, 210-211	
	2. Factor a whole number into a product of its primes.	51, 56	
	3. Demonstrate the relationship and equivalency among ratios and percents.	178-180, 189-195	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Understand the meaning of operations and how they relate to one another.	4. Use proportions to solve problems.	182-188, 193-195	
	5. Explain and perform: <ul style="list-style-type: none">• whole number division and express remainders as decimals or appropriately in the context of the problem• addition, subtraction, multiplication, and division with decimals• addition and subtraction with integers• addition, subtraction, and multiplication with fractions and mixed numerals	125-126, 135, 142-143, 146-151, 154-155, 157-161, 162-166, 167-170, 201-205, 206-209	
	6. Determine the least common multiple and the greatest common divisor of whole numbers and use them to solve problems with fractions.	The opportunity to address this objective is available on the following pages: 58, 61	

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C. Compute fluently and make reasonable estimates.	1. Estimate quantities involving rational numbers using various estimations.	94-116	
	2. Use estimates to check reasonableness of results and make predictions in situations involving rational numbers.	The opportunity to address this objective is available on the following pages: 94-116, 413-414	
	3. Determine if a problem situation calls for an exact or approximate answer and perform the appropriate computation.	414	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Compute fluently and make reasonable estimates.	4. Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	The opportunity to address this objective is available on the following pages: 16-18, 31, 38-42, 45-48	
	5. Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.	43-44, 190, 193-195	
	6. Interpret and use ratios in different contexts.	178-180, 181-188	
	7. Compute and perform multiplication and division of fractions and decimals and apply these procedures to solving problems.	167-170, 173-176	

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Standard 2: ALGEBRA: Students will understand algebraic concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Understand patterns, relations, and functions.	1. Solve problems involving proportional relationships.	182-188, 370	
	2. Graph ordered pairs in the coordinate plane.	256-266, 407	
	3. Explain and use symbols to represent unknown quantities and variable relationships.	236-245, 406	
	4. Explain and use the relationships among ratios, proportions, and percents.	177-197	
	5. Make generalizations based on observed patterns and relationships.	63, 65, 67, 82, 85, 91, 92, 210, 381, 401-402, 493-498	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Represent and analyze mathematical situations and structures using algebraic symbols.	1. Solve problems involving proportional relationships.	182-188, 370-371	
	2. Use letters to represent an unknown in an equation.	240-245, 246, 406	
	3. Solve one-step linear equations and inequalities in one variable with positive whole-number solutions.	242-243	
	4. Demonstrate that a variable can represent a single quantity that changes.	The opportunity to address this objective is available on the following pages: 240-245	
	5. Demonstrate how changes in one variable affect other variables.	The opportunity to address this objective is available on the following pages: 244-246	

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C. Use mathematical models to represent and understand quantitative relationships.	1. Develop and use mathematical models to represent and justify mathematical relationships found in a variety of situations.	The opportunity to address this objective is available throughout the text.	
	2. Create, explain, and use mathematical models such as: <ul style="list-style-type: none">• Venn diagrams to show the relationships between the characteristics of two or more sets• equations and inequalities to model numerical relationships• three-dimensional geometric models• graphs, tables, and charts to interpret and analyze data	The opportunity to address this objective is available throughout the text.	

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D. Analyze changes in various contexts.	1. Represent and explain changes using one-step equations with one variable.	241-243	
	2. Solve problems that involve change using proportional relationships.	182-188, 370-371	
	3. Use ratios to predict changes in proportional situations.	The opportunity to address this objective is available on the following pages: 178-180, 182-188, 371	
	4. Use tables and symbols to represent and describe proportional and other relationships involving conversions, sequences, and perimeter.	182-188, 295-297, 370-371, 487	
	5. Generate formulas to represent relationships involving changes in perimeter.	The opportunity to address this objective is available on the following pages: 394-397	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.	1. Identify, describe, and classify the properties of, and the relationships between, plane and solid geometric figures: <ul style="list-style-type: none">• measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools (e.g., straightedge, ruler, compass, protractor, drawing software)• understand that the sum of angles of any triangle is 180 degrees and the sum of the angles of any quadrilateral is 360 degrees and use this information to solve problems• visualize and draw two-dimensional views of three-dimensional objects made from rectangular solids	336-342, 345-354, 356-366, 383-392, 464-467, 469-479	
	2. Classify angles as right, obtuse, or straight.	347	
	3. Describe the properties of geometric figures that include regular polygons, circles, ellipses, cylinders, cones, spheres, and cubes.	356-367, 383-392	

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Mathematics Grade 6

Standard 3: GEOMETRY: Students will understand geometric concepts and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.	4. Classify polygons as regular or irregular.	The opportunity to address this objective is available on the following pages: 356-357	
	5. Classify triangles as scalene, isosceles, or equilateral and by angles (i.e., right, acute, and obtuse).	361-363	
	6. Identify angle, line, segment, and ray and use the symbols for each.	337-339, 345	
	7. Describe the relationship between radius, diameter, and circumference of a circle.	367-368, 298	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Specify locations and describe spatial relationships using coordinate geometry and other representational systems.	1. Use coordinate geometry to describe location on a plane.	245, 265-266	
	2. Recognize skewed lines in space.	No specific lesson addresses this objective.	
C. Apply transformations and use symmetry to analyze mathematical situations.	1. Identify line of symmetry with rotation and scaling.	378, 380	
D. Use visualization, spatial reasoning, and geometric modeling to solve problems.	1. Use appropriate technology, manipulatives, constructions, or drawings to recognize or compare geometric figures.	The opportunity to address this objective is available on the following pages: 369-380, 465-467	

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Standard 4: MEASUREMENT: Students will understand measurement systems and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Understand measurable attributes of objects and the units, systems, and process of measurement.	1. Perform multi-step conversions of measurement units to equivalent units within a given system (e.g., 36 inches equals 3 feet or 1 yard).	294, 299, 314-315, 317-318, 327, 329-331, 485-487	
	2. Estimate measurement in both U.S. customary and metric units.	The opportunity to address this objective is available on the following pages: 102, 108, 294, 299, 314-315, 317-318, 327, 329-331, 414, 485-487	
	3. Select and use units of appropriate size and type to measure angles (e.g., degrees, radians), perimeter, area, and capacity in both U.S. customary and metric systems.	294-297, 299-305, 313-315, 346	
	4. Use standard units of linear measurement to the nearest sixteenth of an inch; metric measurements to the nearest millimeter.	294	

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Standard 4: MEASUREMENT: Students will understand measurement systems and applications.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Apply appropriate techniques, tools, and formulas to determine measurements.	1. Apply various measurement techniques and tools, units of measure, and degrees of accuracy to find accurate rational number representations for length, liquid, weight, perimeter, temperature, and time.	294-297, 313-315, 316-317, 319-321, 322-325	
	2. Select and use formulas for perimeters of squares and rectangles.	295-297	
	3. Select and use strategies to estimate measurements including angle measure and capacity.	The opportunity to address this objective is available on the following pages: 313-315, 346	
	4. Select and justify the selection of measurement tools, units of measure, and degrees of accuracy appropriate to the given situation.	The opportunity to address this objective is available on the following pages: 294, 314, 317, 318, 322, 414, 465-468	

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Mathematics Grade 6

Standard 5: DATA ANALYSIS AND PROBABILITY: Students will understand how to formulate questions, analyze data, and determine probabilities.

Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	1. Use statistical representations to analyze data.	266-268, 272-284, 400	
	2. Draw and compare different graphical representations of the same data.	The opportunity to address this objective is available on the following pages: 272-284, 411	
	3. Use mean, median, mode, and range to describe data.	259-263	
	4. Sketch circle graphs to display data.	276	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	5. Solve problems by collecting, organizing, displaying and interpreting data.	249-254, 265-284, 400, 403, 407	
	6. Compare different samples of a population with the entire population and determine the appropriateness of using a sample	249-252	
	7. Conduct and explain sampling techniques such as observations, surveys, and random sampling for gathering data.	249-252	
	8. Determine the median for a rational number data set containing an odd number of data points.	261	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
A. Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	9. Calculate and explain the median for a whole number data set containing an even number of data points.	261	
	10. Explain advantages and disadvantages of using various display formats for a specific data set.	264-292	
	11. Formulate and solve problems by collecting, organizing, displaying, and interpreting data.	248-254, 255-262, 263, 264-292, 400, 403, 406, 411	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Select and use appropriate statistical methods to analyze data.	1. Choose an appropriate graphical format to organize and represent data.	264-292, 400, 403, 406, 411	
	2. Describe the effects of missing or incorrect data.	The opportunity to address this objective is available on the following pages: 258, 263, 264-292	
	3. Compute and analyze statistical measurements for data sets: <ul style="list-style-type: none">• understand how additional data added to data sets may affect the computations of central tendency• understand how the inclusion or exclusion of outliers affects measures of central tendency• know why a specific measure of central tendency provides the most useful information in a given context	The opportunity to address this objective is available on the following pages: 255-263, 264-292	
	4. Use data samples of a population and describe the characteristics and limitations of the sample.	249-252	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
B. Select and use appropriate statistical methods to analyze data.	5. Identify different ways of selecting a sample (e.g., convenience sampling, responses to a survey, random sampling) and which method makes a sample more representative for a population.	249	
	6. Explain how the way a question is asked in a survey might influence the results obtained.	The opportunity to address this objective is available on the following pages: 247-252	
	7. Identify data that represent sampling errors and explain why the sample and the display might be biased.	No specific lesson addresses this objective.	
	8. Identify claims based on statistical data and, in sample cases, evaluate the validity and usefulness of the claims.	No specific lesson addresses this objective.	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
C. Develop and evaluate inferences and predictions that are based on data.	1. Identify claims based on statistical data and evaluate the validity of the claim.	No specific lesson addresses this objective.	
	2. Conduct observations, surveys, experiments and/or simulations, record the results in charts, tables, or graphs, and use the results to draw conclusions and make predictions.	249-254, 264-284, 286-292	
	3. Find all possible combinations in a given set (e.g., the number of ways a set of books can be arranged on a shelf).	291-292, 403, 411	
	4. Compare expected results with actual results in a simple experiment.	286-292	

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Benchmark	Performance Standards	Publisher Citation (pages)	% Meets Standard*
D. Understand and apply basic concepts of probability.	1. List all possible outcomes for a compound event composed of two independent events and recognize whether an outcome is certain, impossible, likely, or unlikely.	The opportunity to address this objective is available on the following pages: 286-292	
	2. Determine and compare experimental (empirical) and mathematical (theoretical) probabilities (e.g., flipping two color counters).	The opportunity to address this objective is available on the following pages: 286-292	
	3. Determine theoretical and experimental probabilities and use them to make predictions about events.	The opportunity to address this objective is available on the following pages: 286-292	
	4. Represent all possible outcomes for compound events in an organized way (e.g., tables, grids, tree diagrams) and express the theoretical probability of each outcome.	291, 292, 403, 411	

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D. Understand and apply basic concepts of probability.	5. Use data to estimate the probability of future events (e.g., batting averages).	The opportunity to address this objective is available on the following pages: 286-287	
	6. Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, 1 - P is the probability of the event not occurring.	287	
	7. Describe the difference between independent and dependent events and identify situations involving independent or dependent events.	No specific lesson addresses this objective.	

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