

New Mexico Expanded Grade Band Expectations

Math: Grades 9–12

Strand: ALGEBRA, FUNCTIONS, AND GRAPHS
Standard I: Students will understand algebraic concepts and applications.

	9–12 Benchmark 1: Represent and analyze mathematical situations and structures using algebraic symbols		9–12 Benchmark 2: Understand patterns, relations, functions, and graphs		9–12 Benchmark 3: Use mathematical models to represent and understand quantitative relationships		9–12 Benchmark 4: Analyze changes in various contexts	
ENGAGEMENT	The student	GLPS		GLPS		GLPS		GLPS
	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of algebraic symbols</i>	9-12.1 9-12.10 9-12.17	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of patterns and graphs</i>	9-12.4 9-12.9	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of quantity</i>	9-12.2	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of change</i>	9-12.3

	9–12 Benchmark 1: Represent and analyze mathematical situations and structures using algebraic symbols		9–12 Benchmark 2: Understand patterns, relations, functions, and graphs		9–12 Benchmark 3: Use mathematical models to represent and understand quantitative relationships		9–12 Benchmark 4: Analyze changes in various contexts	
	2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of algebraic symbols	9-12.1 9-12.10 9-12.17	<i>2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of patterns and graphs</i>	9-12.4 9-12.9	<i>2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of quantity</i>	9-12.2	<i>2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of change</i>	9-12.3
	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of algebraic symbols</i>	9-12.1 9-12.10 9-12.17	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of patterns and graphs</i>	9-12.4 9-12.9	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of quantity</i>	9-12.2	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of change</i>	9-12.3

	9–12 Benchmark 1: Represent and analyze mathematical situations and structures using algebraic symbols		9–12 Benchmark 2: Understand patterns, relations, functions, and graphs		9–12 Benchmark 3: Use mathematical models to represent and understand quantitative relationships		9–12 Benchmark 4: Analyze changes in various contexts	
PRE-SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	3-a creates another set of algebraic objects using 1:1 correspondence	9-12.1	3-a matches patterns and textures among concrete representations of patterns and graphs	9-12.1	<i>3-a uses numerals to indicate a concrete preference</i>	9-12.1	<i>3-a distinguishes quantities of math objects (e.g., equal, more, less, fewer)</i>	9-12.3
	4-a matches sets of math objects and numerals	9-12.7	3-b matches math objects to pictures (visual or tactile)	9-12.1	<i>3-b matches equivalent sets of math objects</i>	9-12.3	<i>4-a acknowledges that the number of items in a set is the same even though the set has been rearranged</i>	9-12.2 9-12.3
			<i>4-a matches and manipulates pictures and objects to sort into sets</i>	9-12.1	<i>3-c creates another set of math objects using 1:1 correspondence</i>	9-12.7	<i>4-b represents a quantity up to 50 using a set of objects</i>	9-12.2 9-12.3
			<i>4-b identifies same and different among mathematical representations</i>	9-12.1	<i>4-a uses numerals to give abstract information</i>	9-12.1		

	9–12 Benchmark 1: Represent and analyze mathematical situations and structures using algebraic symbols		9–12 Benchmark 2: Understand patterns, relations, functions, and graphs		9–12 Benchmark 3: Use mathematical models to represent and understand quantitative relationships		9–12 Benchmark 4: Analyze changes in various contexts	
			<i>4-c completes a simple pattern</i>	9-12.2	<i>4-b uses correct numerals to represent quantities of objects up to 50</i>	9-12.1		

	9–12 Benchmark 1: Represent and analyze mathematical situations and structures using algebraic symbols		9–12 Benchmark 2: Understand patterns, relations, functions, and graphs		9–12 Benchmark 3: Use mathematical models to represent and understand quantitative relationships		9–12 Benchmark 4: Analyze changes in various contexts	
SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	<i>5-a identifies numerals from 0 to 100</i>	9-12.7	<i>5-a matches and manipulates pictures and objects to create sets and make comparisons between sets</i>	9-12.2	<i>5-a demonstrates that numbers counted later in a sequence represent greater quantities up to 100</i>	9-12.1	<i>5-a identifies numerals from 0 - 100</i>	9-12.2 9-12.3
	5-b represents complex addition and subtraction number sentences, using pictures, objects, and/or manipulatives	9-12.2 9-12.6	<i>6-a recognizes upward (positive), downward (negative), and flat (zero) slopes of lines</i>	9-12.3 9-12.10	<i>5-b describes complex cause and effect (e.g., with more than one variable)</i>	9-12.3 9-12.4	<i>6-a orders numerals from 0 to 100</i>	9-12.2 9-12.3
	6-a generates and solves one-step equations with one unknown, using addition, subtraction, and multiplication	9-12.4			<i>6-a uses a variety of computational methods (e.g., mental math, paper pencil, calculator, or computer)</i>	9-12.1	<i>6-b estimates specific increase/decrease in quantity of objects (e.g., increased by ___)</i>	9-12.5 9-12.6

	9–12 Benchmark 1: Represent and analyze mathematical situations and structures using algebraic symbols		9–12 Benchmark 2: Understand patterns, relations, functions, and graphs		9–12 Benchmark 3: Use mathematical models to represent and understand quantitative relationships		9–12 Benchmark 4: Analyze changes in various contexts	
	<i>6-b orders numerals from 0 to 100</i>	9-12.1						
EXTENDED SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	<i>7-a solves complex addition and subtraction number sentences (e.g., involving two-digit numbers)</i>	9-12.2 9-12.6	<i>7-a identifies characteristics of linear graphs (e.g., positive, negative, zero)</i>	9-12.3 9-12.8 9-12.9	7-a graphs a line given two points in quadrant one, such as (2, 10)	9-12.3 9-12.4 9-12.7	<i>7-a makes comparisons using specific terms slower, faster, and same speed or rate (e.g., miles per hour, feet per second)</i>	9-12.5 9-12.6
	<i>7-b writes a complex number sentence with a variable (e.g., using two-digit numbers and a variable)</i>	9-12.2	<i>8-a identifies symmetrical graphs of complex geometrical shapes</i>	9-12.9	8-a uses T-chart to express relationships between variables (e.g., x,y in $x=y$ with numerals up to 100)	9-12.3 9-12.4	<i>8-a describes specific situations of how increasing rate decreases time (e.g., $d=rt$)</i>	9-12.2

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	<i>8-a uses addition, subtraction, multiplication, and division with numerals up to 100</i>	9-12.17			<i>8-b graphs lines given points and/or tables using positive numerals up to 100</i>	9-12.3 9-12.4		
	<i>8-b recognizes that there are different types of numbers (e.g., whole, fractions, decimals)</i>	9-12.1 9-12.7						
	<i>8-c recognizes equivalent representations of the same number</i>	9-12.7						
	<i>8-d substitutes numbers for variables in simple expressions (e.g., $2x$, if $x = 2, 3, \text{ or } 4$)</i>	9-12.6						

Strand: GEOMETRY AND TRIGONOMETRY

Standard II: Students will understand geometric concepts and applications.

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
ENGAGEMENT	The student	GLPS		GLPS		GLPS		GLPS
	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of geometric shapes</i>	9-12.1 9-12.4	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of spatial relationships</i>	9-12.1	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of symmetry</i>	9-12.2	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of spatial relationships and geometric models</i>	9-12.1

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
	2-a <i>maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of geometric shapes</i>	9-12.1 9-12.4	2-a <i>maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of spatial relationships</i>	9-12.1	2-a <i>maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of symmetry</i>	9-12.2	2-a <i>maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of spatial relationships and geometric models</i>	9-12.1

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of geometric shapes</i>	9-12.1 9-12.4	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of spatial relationships</i>	9-12.1	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of symmetry</i>	9-12.2	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of spatial relationships and geometric models</i>	9-12.1

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
PRE-SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	<i>3-a sorts two-dimensional shapes and/or manipulatives (e.g., triangles, circles, rectangles, pentagons, hexagons)</i>	9-12.1	<i>3-a distinguishes between concrete positional objects (e.g., left, right, up, down)</i>	9-12.1	<i>3-a manipulates and combines complex geometrical shapes (e.g., triangles, circles, rectangles, pentagons, hexagons)</i>	9-12.1 9-12.2	<i>3-a matches congruent triangles, circles, rectangles, pentagons, and hexagons that are arranged in similar spatial orientations</i>	9-12.1
	<i>3-b matches two-dimensional shapes (e.g., triangles, circles, rectangles, pentagons, hexagons)</i>	9-12.1	<i>4-a matches pictures of lines with the same slope on a coordinate plane (e.g., positive, negative, and zero)</i>	9-12.1	<i>4-a uses a variety of materials (e.g., manipulatives, computer programs, etc.) to move objects left, right, up, and down</i>	9-12.1 9-12.2	<i>4-a matches congruent triangles, circles, rectangles, pentagons, and octagons that are in various spatial orientations</i>	9-12.1

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
	<i>4-a sorts complex two- and three-dimensional shapes and objects by attributes</i>	9-12.4						

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	<i>5-a names complex two- and three-dimensional shapes in the environment</i>	9-12.1 9-12.4	<i>5-a plots a point on a coordinate plane (e.g., latitude and longitude)</i>	9-12.1	<i>5-a recognizes complex two- or three-dimensional geometric objects as they would appear from nearby and far away</i>	9-12.1 9-12.2	<i>5-a distinguishes between complex geometrical shapes</i>	9-12.3
	<i>5-b identifies faces, edges, and bases on three-dimensional objects (e.g., cubes, spheres, cylinders, prisms)</i>	9-12.4	<i>5-b specifies locations and describes spatial relationships in school settings, using north, south, east, west</i>	9-12.1	6-a uses manipulatives to demonstrate movement of complex geometrical shapes; for example, the student follows directions to rotate it; move it left, right, up, and down	9-12.1 9-12.2	<i>6-a identifies triangles, circles, rectangles, pentagons, and hexagons</i>	9-12.3

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
	5-c matches like angles (e.g., acute, obtuse, right)	9-12.3	<i>5-c matches parallel, perpendicular, and intersecting lines</i>	9-12.3	6-b uses a variety of materials (e.g., manipulatives, computer programs, etc.) to move complex geometrical objects left, right, up, and down	9-12.1 9-12.2		
	5-d identifies angles in the environment	9-12.3	<i>6-a creates a coordinate plane with an x and y axis (e.g., compass key)</i>	9-12.1				
	<i>6-a labels complex two and three dimensional shapes</i>	9-12.1 9-12.4						

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
	6-b combines and/or separates complex geometrical shapes into different configurations	9-12.2						

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
EXTENDED SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	<i>7-a names and compares complex three-dimensional shapes (e.g., cubes, spheres, cylinders, prisms)</i>	9-12.4	<i>7-a uses a coordinate plane to demonstrate directionality (e.g., north, south, east, west)</i>	9-12.1	7-a uses a variety of materials (e.g., manipulatives, computer programs, etc.) to manipulate geometrical pictures or icons to demonstrate rotation, reflection, translation, and size increase and reduction	9-12.1 9-12.2	7-a describes specific attributes of triangles, circles, rectangles, pentagons, and hexagons	9-12.3

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
	<i>7-b describes the differences between acute, obtuse, and right angles</i>	9-12.3	<i>7-b determines if lines are parallel, perpendicular, or intersecting</i>	9-12.1	8-a uses manipulatives to separate, fold, and combine complex two-dimensional geometrical shapes	9-12.1 9-12.2	8-a solves complex problems involving perimeter and area with rectangles and triangles (e.g., using two-digit numbers)	9-12.3
	<i>8-a finds the perimeter of triangles, circles, rectangles, pentagons, and hexagons</i>	9-12.2	<i>8-a describes differences between parallel, perpendicular, and intersecting lines</i>	9-12.3	<i>8-b describes the results of folding, partitioning, and combining different complex geometrical shapes</i>	9-12.1 9-12.2	<i>8-b identifies the circumference and radius of a circle</i>	9-12.3

	9–12 Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships		9–12 Benchmark 2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems		9–12 Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations		9–12 Benchmark 4: Use visualization, spatial reasoning, and geometric modeling to solve problems	
	<i>8-b describes differences between rectangles in the environment</i>	9-12.3	<i>8-b constructs a line on a coordinate plane given points in multiples of 5 up to 100</i>	9-12.1				
	<i>8-c describes differences between triangles (e.g., scalene, isosceles, equilateral) in the environment</i>	9-12.3						

Strand: DATA ANALYSIS AND PROBABILITY

Standard III: Students will understand how to formulate questions, analyze data, and determine probabilities.

	9–12 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		9–12 Benchmark 2: Select and use appropriate statistical methods to analyze data		9–12 Benchmark 3: Develop and evaluate inferences and predictions that are based on data		9–12 Benchmark 4: Understand and apply basic concepts of probability	
ENGAGEMENT	The student	GLPS		GLPS		GLPS		GLPS
	1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of data collection and display	9-12.1	1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of data collection and display	9-12.1	1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of data collection and display	9-12.2	<i>1-a attends to mathematical stimuli and materials that involve sensory input (e.g., sight, sound, feel) of probability</i>	9-12.3

	9–12 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		9–12 Benchmark 2: Select and use appropriate statistical methods to analyze data		9–12 Benchmark 3: Develop and evaluate inferences and predictions that are based on data		9–12 Benchmark 4: Understand and apply basic concepts of probability	
	2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of data collection and display	9-12.1	2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of data collection and display	9-12.1	<i>1-b reacts to changes in the environment that signal predictable events that involve sensory input (e.g., sight, sound, feel) of data collection and display</i>	9-12.2	<i>1-b shows anticipation for the next activity that involves sensory input (e.g., sight, sound, feel) of probability</i>	9-12.3

	9–12 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		9–12 Benchmark 2: Select and use appropriate statistical methods to analyze data		9–12 Benchmark 3: Develop and evaluate inferences and predictions that are based on data		9–12 Benchmark 4: Understand and apply basic concepts of probability	
	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of data collection and display</i>	9-12.1	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of data collection and display</i>	9-12.1	2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of data collection and display	9-12.2	<i>2-a maintains and shifts attention between two or more mathematical objects, activities, or classroom partners that involve sensory input (e.g., sight, sound, feel) of probability</i>	9-12.3
					<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of data collection and display</i>	9-12.2	<i>2-b maintains interactions with others during math activities that involve sensory input (e.g., sight, sound, feel) of probability</i>	9-12.3

	9–12 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		9–12 Benchmark 2: Select and use appropriate statistical methods to analyze data		9–12 Benchmark 3: Develop and evaluate inferences and predictions that are based on data		9–12 Benchmark 4: Understand and apply basic concepts of probability	
PRE-SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	3-a matches identical math objects that represent graphs, charts, and tables	9-12.2 9-12.3	3-a matches identical math objects that represent tables and graphs	9-12.3	3-a matches identical objects that represent graphs	9-12.2 9-12.3	<i>3-a anticipates sequential events in a single day</i>	9-12.1 9-12.2
	4-a matches real object with visual/tactile representation of object	9-12.2 9-12.3	<i>4-a matches like tables in similar spatial orientations</i>	9-12.3	<i>4-a matches like representations of data sets</i>	9-12.1 9-12.2	<i>4-a follows a schedule of routine events</i>	9-12.1 9-12.2

	9–12 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		9–12 Benchmark 2: Select and use appropriate statistical methods to analyze data		9–12 Benchmark 3: Develop and evaluate inferences and predictions that are based on data		9–12 Benchmark 4: Understand and apply basic concepts of probability	
SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	<i>5-a identifies real and representational objects (e.g., real apple vs. apple-shaped eraser)</i>	9-12.2 9-12.3	<i>5-a recognizes that tables and histograms contain meaningful information</i>	9-12.3	<i>5-a distinguishes between data sets that reflect different patterns</i>	9-12.1 9-12.2	<i>5-a anticipates predictable outcomes</i>	9-12.2 9-12.5
	<i>6-a identifies graphs used to display data (e.g., line, bar)</i>	9-12.1	<i>6-a collects data related to a posed question</i>	9-12.3	<i>6-a collects data relating to familiar everyday experiences by counting, tallying, observing, and interviewing</i>	9-12.3	6-a recognizes the probability of a given event	9-12.2 9-12.5
	<i>6-b identifies facts and opinions</i>	9-12.3	<i>6-b recognizes appropriate analyses of data sets</i>	9-12.3	<i>6-b compares two sets of data using terms “less,” “fewer,” “more,” or “equal”</i>	9-12.1 9-12.2		9-12.5 9-12.6
	<i>6-c generates questions that can be answered by data collection</i>	9-12.2 9-12.3						

	9–12 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		9–12 Benchmark 2: Select and use appropriate statistical methods to analyze data		9–12 Benchmark 3: Develop and evaluate inferences and predictions that are based on data		9–12 Benchmark 4: Understand and apply basic concepts of probability	
EXTENDED SYMBOLIC	The student	GLPS		GLPS		GLPS		GLPS
	<i>7-a identifies graphs, charts, and tables used to display data (e.g., line, bar, pie, spreadsheets)</i>	9-12.2 9-12.3	7-a answers questions based upon data collected	9-12.3	<i>7-a makes data-based decisions given information on possible choices</i>	9-12.1 9-12.2	<i>7-a predicts the probability of an event occurring/not occurring</i>	9-12.2 9-12.5
	<i>8-a describes differences between facts and opinions</i>	9-12.2 9-12.3	<i>7-b identifies which values appear most often in a data set</i>	9-12.3	<i>8-a compares and draws conclusions between three or more data sets</i>	9-12.2	<i>8-a compares predicted versus actual results in a probability experiment</i>	9-12.2 9-12.5
	<i>8-b describes differences between graphs, charts, and tables</i>	9-12.2 9-12.3	<i>8-a analyzes data presented in various formats using specific terms “ ___ less,” “ ___ fewer,” “ ___ more,” or “equal”</i>	9-12.3	<i>8-b makes predictions based upon data set analysis</i>	9-12.2	<i>8-b uses numbers from 0 to 1 to describe probability</i>	9-12.2 9-12.5

	9–12 Benchmark 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them		9–12 Benchmark 2: Select and use appropriate statistical methods to analyze data		9–12 Benchmark 3: Develop and evaluate inferences and predictions that are based on data		9–12 Benchmark 4: Understand and apply basic concepts of probability	
	<i>8-c discusses potential biases, as reflected by data</i>	9-12.2 9-12.3	8-b constructs tables and graphs to display relevant data	9-12.3	<i>8-c distinguishes between correlation and cause/effect relationship</i>	9-12.2		