Louisiana Comprehensive Curriculum Grade Level Expectations
for Grade 4 Mathematics
Correlated to
Academic Language Notebooks™: The Language of Math, Level D/Grade 4

GLE #	GLE Text and Benchmarks	Student Worktext and Teacher/Tutor Resource Book
Unit 1: Data, Graphs, and Numbers		
Number and Number Relations		
2.	Read, write, compare, and order whole numbers using place value concepts, standard notation, and models through 1,000,000 (N-1-E) (N-3-E) (A-1-E)	
4.	Know all basic facts for multiplication and division through 12 x 12 and 144 ÷ 12, and recognize factors of composite numbers less than 50 (N-1-E) (N-6-E) (N-7-E)	
12.	Count money, determine change, and solve simple word problems involving money amounts using decimal notation (N-6-E) (N-9-E) (M-1-E) (M-5-E)	Module 4: Money
13.	Determine when and how to estimate and when and how to use mental math, calculators, or paper/pencil strategies to solve multiplication and division problems (N-8-E)	Module 12: Mental Math and Estimation with Multiplication and Division
14.	Solve real-life problems, including those in which some information is not given (N-9-E)	
Data Analysis, Probability, and Discrete Math		
34.	Summarize information and relationships revealed by patterns or trends in a graph, and use the information to make predictions (D-1-E)	Module 20: Read and Make Graphs
35.	Find and interpret the meaning of mean, mode, and median of a small set of numbers (using concrete objects) when the answer is a whole number (D-1-E)	Module 19: Collect and Organize Data

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36.	Analyze, describe, interpret, and construct various types of charts and graphs using appropriate titles, axis labels, scales, and legends (D-2-E) (D-1-E)	Module 19: Collect and Organize Data Module 20: Read and Make Graphs
37.	Determine which type of graph best represents a given set of data (D-1-E), (D-2-E)	Module 20: Read and Make Graphs
39.	Use lists, tables, and tree diagrams to generate and record all possible combinations for 2 sets of 3 or fewer objects (e.g., combinations of pants and shirts, days and games) and for given experiments (D-3-E) (D-4-E)	
40.	Determine the total number of possible outcomes for a given experiment using lists, tables, and tree diagrams (e.g., spinning a spinner, tossing 2 coins) (D-4-E) (D-5-E)	
41.	Apply appropriate probabilistic reasoning in real-life contexts using games and other activities (e.g., examining fair and unfair situations) (D-5-E) (D-6-E)	
Patterns, Relations, and Functions		
42.	Find and describe patterns resulting from operations involving even and odd numbers (such as even + even = even) (P-1-E)	Module 15: Patterns and Functions
43.	Identify missing elements in a number pattern (P-1-E)	Module 15: Patterns and Functions
44.	Represent the relationship in an input-output situation using a simple equation, graph, table, or word description (P-2-E)	Module 15: Patterns and Functions

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GLE #	GLE Text and Benchmarks	Student Worktext and Teacher/Tutor Resource Book
Unit 2: Place Value, Number Sense and Measurement		
Number and Number Relations		
1.	Read and write place value in word, standard, and expanded form through 1,000,000 (N-1-E)	
2.	Read, write, compare, and order whole numbers using place value concepts, standard notation, and models through 1,000,000 (N-1-E) (N-3-E) (A-1-E)	
7.	Give decimal equivalents of halves, fourths, and tenths (N-2-E) (N-1-E)	Module 30: Decimal Concepts
8.	Use common equivalent reference points for percents (i.e., ¼ , ½, ¾, and 1 whole) (N-2-E)	
12.	Count money, determine change, and solve simple word problems involving money amounts using decimal notation (N-6-E) (N-9-E) (M-1-E) (M-5-E)	Module 4: Money
13.	Determine when and how to estimate and when and how to use mental math, calculators, or paper/pencil strategies to solve multiplication and division problems (N-8-E)	Module 12: Mental Math and Estimation with Multiplication and Division
14.	Solve real-life problems, including those in which some information is not given (N-9-E)	
Algebra		
15.	Write number sentences or formulas containing a variable to represent real-life problems (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
Measurement		
23.	Set up, solve, and interpret elapsed time problems (M-2-E) (M-5-E)	Module 16: Time

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for Grade 4 Mathematics
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Academic Language Notebooks™: The Language of Math, Level D/Grade 4

GLE #	GLE Text and Benchmarks	Student Worktext and Teacher/Tutor Resource Book
Data Analysis, Probability, and Discrete Math		
36.	Analyze, describe, interpret, and construct various types of charts and graphs using appropriate titles, axis labels, scales, and legends (D-2-E) (D-1-E)	Module 19: Collect and Organize Data Module 20: Read and Make Graphs
40.	Determine the total number of possible outcomes for a given experiment using lists, tables, and tree diagrams (e.g., spinning a spinner, tossing 2 coins) (D-4-E) (D-5-E)	
Unit 3: Understanding Multiplication and Division		
Number and Number Relations		
3.	Illustrate with manipulatives when a number is divisible by 2, 3, 5, or 10 (N-1-E)	Module 11: Model Division by 1- and 2-Digit Numbers
4.	Know all basic facts for multiplication and division through 12 x 12 and 144 ÷ 12, and recognize factors of composite numbers less than 50 (N-1-E) (N-6-E)(N-7-E)	
10.	Solve multiplication and division number sentences including interpreting remainders (N-4-E) (A-3-E)	Module 8: Multiplication Properties and Division Rules Module 9: Multiplication and Division Facts
13.	Determine when and how to estimate, and when and how to use mental math, calculators, or paper/pencil strategies to solve multiplication and division problems (N-8-E)	Module 12: Mental Math and Estimation with Multiplication and Division
14.	Solve real-life problems, including those in which some information is not given (N-9-E)	

Louisiana Comprehensive Curriculum Grade Level Expectations
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Algebra		
19.	Solve one-step equations with whole number solutions (A-2-E) (N-4-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
Patterns, Relations, and Functions		
42.	Find and describe patterns resulting from operations involving even and odd numbers(such as even + even = even)(P1-E)	Module 15: Patterns and Functions
Unit 4: The Multiplication Algorithm		
Number and Number Relations		
4.	Know all basic facts for multiplication and division through 12 x 12 and 144 ÷ 12, and recognize factors of composite numbers less than 50 (N-1-E)(N-6-E) (N-7-E)	
10.	Solve multiplication and division number sentences including interpreting remainders (N-4-E) (A-3-E)	Module 8: Multiplication Properties and Division Rules Module 9: Multiplication and Division Facts Module 11: Model Division by 1- and 2-Digit Numbers
11.	Multiply 3-digit by 1-digit numbers, 2-digit by 2-digit numbers, and divide 3-digit numbers by 1-digit numbers, with and without remainders (N-6-E) (N-7-E)	Module 10: Model Multiplication by 1- and 2-Digit Numbers Module 11: Model Division by 1- and 2-Digit Numbers
13.	Determine when and how to estimate and when and how to use mental math, calculators, or paper/pencil strategies to solve multiplication and division problems (N-8-E)	Module 12: Mental Math and Estimation with Multiplication and Division
14.	Solve real-life problems, including those in which some information is not given (N-9-E)	

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GLE #	GLE Text and Benchmarks	Student Worktext and Teacher/Tutor Resource Book
Algebra		
15.	Write number sentences or formulas containing a variable to represent real-life problems (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
16.	Write a related story problem for a given algebraic sentence (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
17.	Use manipulatives to represent the distributive property of multiplication over addition to explain multiplying numbers (A-1-E) (A-2-E)	Module 10: Model Multiplication by 1- and 2-Digit Numbers
Patterns, Relations, and Functions		
42.	Find and describe patterns resulting from operations involving even and odd numbers(such as even + even = even)(P1-E)	Module 15: Patterns and Functions
Unit 5: Dividing by 1-Digit Divisors		
Number and Number Relations		
4.	Know all basic facts for multiplication and division through 12 x 12 and 144 ÷ 12, and recognize factors of composite numbers less than 50 (N-1-E)(N-6-E) (N-7-E)	
5.	Read, write, and relate decimals through hundredths and connect them with corresponding decimal fractions (N-1-E)	Module 30: Decimal Concepts
6.	Model, read, write, compare, order, and represent fractions with denominators through twelfths using region and set models (N-1-E) (A-1-E)	Module 27: Compare and Order Equivalent Fractions
7.	Give decimal equivalents of halves, fourths, and tenths (N-2-E) (N-1-E)	Module 30: Decimal Concepts
9.	Estimate fractional amounts through twelfths, using pictures, models, and diagrams (N-2-E)	

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for Grade 4 Mathematics
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GLE #	GLE Text and Benchmarks	Student Worktext and Teacher/Tutor Resource Book
10.	Solve multiplication and division number sentences including interpreting remainders (N-4-E) (A-3-E)	Module 8: Multiplication Properties and Division Rules Module 9: Multiplication and Division Facts Module 11: Model Division by 1- and 2-Digit Numbers
11.	Multiply 3-digit by 1-digit numbers, 2-digit by 2-digit numbers, and divide 3-digit numbers by 1-digit numbers, with and without remainders (N-6-E) (N-7-E)	Module 10: Model Multiplication by 1- and 2-Digit Numbers Module 11: Model Division by 1- and 2-Digit Numbers
13.	Determine when and how to estimate and when and how to use mental math, calculators, or paper/pencil strategies to solve multiplication and division problems (N-8-E)	Module 12: Mental Math and Estimation with Multiplication and Division
15.	Write number sentences or formulas containing a variable to represent real-life problems (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
16.	Write a related story problem for a given algebraic sentence (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
18.	Identify and create true/false and open/closed number sentences (A-2-E)	
19.	Solve one-step equations with whole number solutions (A-2-E) (N-4-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
Unit 6: Geometry and Measurement		
Number and Number Relations		
14.	Solve real-life problems, including those in which some information is not given (N-9-E)	
Algebra		
15.	Write number sentences or formulas containing a variable to represent real-life problems (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations

Louisiana Comprehensive Curriculum Grade Level Expectations
for Grade 4 Mathematics
Correlated to
Academic Language Notebooks™: The Language of Math, Level D/Grade 4

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16.	Write a related story problem for a given algebraic sentence (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
18.	Identify and create true/false and open/closed number sentences (A-2-E)	
19.	Solve one-step equations with whole number solutions (A-2-E) (N-4-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
Measurement		
20.	Measure length to the nearest quarter-inch and mm (M-2-E) (M-1-E)	Module 17: Measures of length (Customary and Metric)
21.	Describe the concept of volume, and measure volume using cubic in. and cubic cm. and capacity using fl. oz. And ml (M-2-E) (M-3-E)	Module 18: Measure of Capacity and Weight/ Mass (Customary and Metric)
22.	Select and use the appropriate standard units of measure, abbreviations, and tools to measure length and perimeter (i.e., in., cm, ft., yd., mile, m, km), area (i.e., square inch, square foot, square centimeter), capacity (i.e., fl. oz., cup, pt., qt., gal., l, ml), weight/mass (i.e., oz., lb., g, kg, ton), and volume (i.e., cubic cm, cubic in.) (M-2-E), (M-1-E)	Module 17: Measures of length (Customary and Metric) Module 18: Measure of Capacity and Weight/ Mass (Customary and Metric) Module 24: Perimeter and Area Module 25: Solid Figures and Volumes
24.	Recognize the attributes to be measured in a real-life situation (M-2-E) (M-5-E)	Module 17: Measures of length (Customary and Metric) Module 18: Measure of Capacity and
25.	Use estimates and measurements to calculate perimeter and area of rectangular objects (including squares) in U.S. (including square feet) and metric units (M-3-E)	Module 24: Perimeter and Area
26.	Estimate the area of an irregular shape drawn on a unit grid (M-3-E)	

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for Grade 4 Mathematics
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27.	Use unit conversions within the same system to solve real-life problems (e.g., 60 sec. = 1 min., 12 objects = 1 dozen, 12 in. = 1 ft., 100 cm = 1 m, 1 pt. = 2 cups) (M-4-E) (N-2-E) (M-5-E)	Module 16: Time Module 17: Measures of length (Customary and Metric) Module 18: Measure of Capacity and Weight/ Mass (Customary and Metric)
Geometry		
28.	Identify the top, bottom, or side view of a given 3-dimensional object(G1-E)(G3-E)	Module 25: Solid Figures and Volumes
29.	Identify, describe the properties of, and draw circles and polygons (triangle, quadrilateral, parallelogram, trapezoid, rectangle, square, rhombus, pentagon, hexagon, octagon, and decagon) (G-2-E)	Module 22: Polygons and Circles
30.	Make and test predictions regarding transformations (i.e., slides, flips, and turns) of plane geometric shapes (G-3-E)	Module 23: Transformations and Symmetry
31.	Identify, manipulate, and predict the results of rotations of 90, 180, 270, and 360 degrees on a given figure (G-3-E)	Module 23: Transformations and Symmetry
32.	Draw, identify, and classify angles that are acute, right, and obtuse (G-5-E) (G-1-E)	Module 21: Points, Lines, Line Segments, Rays, and Angles
33.	Specify locations of points in the first quadrant of coordinate systems and describe paths on maps (G-6-E)	
Data Analysis, Probability, and Discrete Math		
38.	Solve problems involving simple deductive reasoning (D-3-E)	
40.	Determine the total number of possible outcomes for a given experiment using lists, tables, and tree diagrams (e.g., spinning a spinner, tossing 2 coins) (D-4-E) (D-5-E)	
Unit 7: Fun with Fractions and Chance		
Number and Number Relations		

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for Grade 4 Mathematics
Correlated to
Academic Language Notebooks™: The Language of Math, Level D/Grade 4

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5.	Read, write, and relate decimals through hundredths and connect them with corresponding decimal fractions (N-1-E)	Module 30: Decimal Concepts
6.	Model, read, write, compare, order, and represent fractions with denominators through twelfths using region and set models (N-1-E) (A-1-E)	Module 27: Compare and Order Equivalent Fractions
7.	Give decimal equivalents of halves, fourths, and tenths (N-2-E) (N-1-E)	Module 30: Decimal Concepts
8.	Use common equivalent reference points for percents (i.e., ¼, ½, ¾, and 1 whole) (N-2-E)	
9.	Estimate fractional amounts through twelfths, using pictures, models, and diagrams (N-2-E)	
Data Analysis, Probability, and Discrete Math		
35.	Find and interpret the meaning of mean, mode, and median of a small set of numbers (using concrete objects) when the answer is a whole number (D-1-E)	Module 19: Collect and Organize Data
36.	Analyze, describe, interpret, and construct various types of charts and graphs using appropriate titles, axis labels, scales, and legends (D-2-E) (D-1-E)	Module 19: Collect and Organize Data Module 20: Read and Make Graphs
37.	Determine which type of graph best represents a given set of data(D1-E)(D-2-E)	Module 20: Read and Make Graphs
41.	Apply appropriate probabilistic reasoning in real-life contexts using games and other activities (e.g., examining fair and unfair situations) (D-5-E) (D-6-E)	

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Unit 8: Algebraic Thinking- Patterns, Counting Techniques, and Probability		
Number and Number Relations		
4.	Know all basic facts for multiplication and division through 12 x 12 and 144 ÷ 12, and recognize factors of composite numbers less than 50 (N-1-E) (N-6-E) (N-7-E)	
10.	Solve multiplication and division number sentences including interpreting remainders (N-4-E) (A-3-E)	Module 8: Multiplication Properties and Division Rules Module 9: Multiplication and Division Facts Module 11: Model Division by 1- and 2-Digit Numbers
13.	Determine when and how to estimate and when and how to use mental math, calculators, or paper/pencil strategies to solve multiplication and division problems (N-8-E)	Module 12: Mental Math and Estimation with Multiplication and Division
14.	Solve real-life problems, including those in which some information is not given (N-9-E)	
Algebra		
15.	Write number sentences or formulas containing a variable to represent real-life problems (A-1-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
18.	Identify and create true/false and open/closed number sentences (A-2-E)	
19.	Solve one-step equations with whole number solutions (A-2-E) (N-4-E)	Module 13: Algebraic Expressions Module 14: Algebraic Equations
Geometry		
33.	Specify locations of points in the first quadrant of coordinate systems and describe paths on maps (G-6-E)	

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Data Analysis, Probability, and Discrete Math		
35.	Find and interpret the meaning of mean, mode, and median of a small set of numbers (using concrete objects) when the answer is a whole number (D-1-E)	Module 19: Collect and Organize Data
38.	Solve problems involving simple deductive reasoning (D-3-E)	
39.	Use lists, tables, and tree diagrams to generate and record all possible combinations for 2 sets of 3 or fewer objects (e.g., combinations of pants and shirts, days and games) and for given experiments (D-3-E) (D-4-E)	
40.	Determine the total number of possible outcomes for a given experiment using lists, tables, and tree diagrams (e.g., spinning a spinner, tossing 2 coins) (D-4-E) (D-5-E)	
41.	Apply appropriate probabilistic reasoning in real-life contexts using games and other activities (e.g., examining fair and unfair situations) (D-5-E) (D-6-E)	
Patterns, Relations, and Functions		
43.	Identify missing elements in a number pattern (P-1-E)	Module 15: Patterns and Functions
44.	Represent the relationship in an input-output situation using a simple equation, graph, table, or word description (P-2-E)	Module 15: Patterns and Functions