



Correlation to Algebra I Grade level Expectations

	Mathematics Curriculum Framework	Lesson Number	Lesson Title
NUMBER AND NUMBER RELATIONS			
1.	Identify and describe differences among natural numbers, whole numbers, integers, rational numbers, and irrational numbers (N-1-H) (N-2-H) (N-3-H)	HA1-20	Classifying numbers into subsets of real numbers
2.	Evaluate and write numerical expressions involving integer exponents (N-2-H)	HA1-005	Evaluating algebraic expressions
		HA1-065	Evaluating expressions containing exponents
3.	Apply scientific notation to perform computations, solve problems, and write representations of numbers (N-2-H)	HA1-235	Writing, multiplying, and dividing numbers written in scientific notation
4.	Distinguish between an exact and an approximate answer, and recognize errors introduced by the use of approximate numbers with technology (N-3-H) (N-4-H) (N-7-H)	MPA-006	Determine reasonableness of answers and appropriate methods of computation
5.	Demonstrate computational fluency with all rational numbers (e.g., estimation, mental math, technology, paper/pencil) (N-5-H)	HA1-040	The addition rule for real numbers
		HA1-045	Subtracting real numbers
		HA1-050	Multiplying real numbers
		HA1-320	Simplifying rational expressions
		HA1-325	Multiplying rational expressions
		HA1-055	Dividing real numbers
6.	Simplify and perform basic operations on numerical expressions involving radicals (e.g., $2\sqrt{3} + 5\sqrt{3} = 7\sqrt{3}$)	HA1-495	Simplifying sums and differences of radicals
		HA1-500	Simplifying products of radicals
		HA1-505	Simplifying quotients of radicals
7.	Use proportional reasoning to model and solve real-life problems involving direct and inverse variation (N-6-H)	HA1-450	Solving problems involving direct variation and inverse variation
ALGEBRA			
8.	Use order of operations to simplify or rewrite variable expressions (A-1-H) (A-2-H)	HA1-060	Evaluate expressions using the order of operations
9.	Model real-life situations using linear expressions, equations, and inequalities (A-1-H) (D-2-H) (P-5-H)	HA1-870	Solving problems with systems of linear equations and inequalities
10.	Identify independent and dependent variables in real-life relationships (A-1-H)	HA1-436	Identifying relations
		HA1-437	Identifying relations as functions
11.	Use equivalent forms of equations and inequalities to solve real-life problems (A-1-H)	HA1-960	Real-world applications of linear functions
		HA1-870	Solving problems with systems of linear equations and inequalities
12.	Evaluate polynomial expressions for given values of the variable (A-2-H)	HA1-005	Evaluating algebraic expressions

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13.	Translate between the characteristics defining a line (i.e., slope, intercepts, points) and both its equation and graph (A-2-H) (G-3-H)	HA1-398	Graphing linear equations using slope and the y-intercept or slope and a point
14.	Graph and interpret linear inequalities in one or two variables and systems of linear inequalities (A-2-H) (A-4-H)	HA1-180 HA1-475	Graphing equations and inequalities on the number line Graphing the solution set of a system of linear inequalities
15.	Translate among tabular, graphical, and algebraic representations of functions and real-life situations (A-3-H) (P-1-H) (P-2-H)	HA1-436 HA1-437 HA1-438 HA1-439	Identifying relations Identifying relations as functions Finding the domain and range of functions Using function notation
16.	Interpret and solve systems of linear equations using graphing, substitution, elimination, with and without technology, and matrices using technology (A-4-H)	HA1-455 HA1-460 HA1-465 HA1-470 HA1-806	Using graphs to solve systems of linear equations Solving systems of linear equations by the substitution method Solving systems of linear equations by the addition/subtraction method Solving systems of linear equations by the multiply/add/subtract methods Solving systems of linear equations using the graphing calculator
MEASUREMENT			
17.	Distinguish between precision and accuracy (M-1-H)	HA1-515	Using the Pythagorean Theorem (Lesson Enrichment)
18.	Demonstrate and explain how the scale of a measuring instrument determines the precision of that instrument (M-1-H)	HA1-235	Writing, multiplying, and dividing numbers written in scientific notation (Lesson Enrichment)
19.	Use significant digits in computational problems (M-1-H) (N-2-H)	HA1-235	Writing, multiplying, and dividing numbers written in scientific notation (Lesson Enrichment)
20.	Demonstrate and explain how relative measurement error is compounded when determining absolute error (M-1-H) (M-2-H) (M-3-H)	HA1-062	Adding, Subtracting, Multiplying, and Dividing Real Numbers (Lesson Enrichment)
21.	Determine appropriate units and scales to use when solving measurement problems (M-2-H) (M-3-H) (M-1-H)	MPA-080	Solving proportions (Lesson Enrichment)
22.	Solve problems using indirect measurement (M-4-H)	HA1-516	Applications of the Pythagorean Theorem
GEOMETRY			
23.	Use coordinate methods to solve and interpret problems (e.g., slope as rate of change, intercept as initial value, intersection as common solution, midpoint as equidistant) (G-2-H) (G-3-H)	HA1-398 HA1-401	Graphing linear equations using slope and the y-intercept or slope and a point How variations of "m" and "b" affect the graph of $y = mx + b$
24.	Graph a line when the slope and a point or when two points are known (G-3-H)	HA1-398 HA1-405 HA1-410	Graphing linear equations using slope and the y-intercept or slope and a point Determining an equation of a line given the slope and coordinates of 1 point Determining an equation of a line given the coordinates of 2 points
25.	Explain slope as a representation of "rate of change" (G-3-H) (A-1-H)	HA1-955	Analyzing linear functions
26.	Perform translations and line reflections on the coordinate plane (G-3-H)	MPA-108	Graphing translations and reflections on the coordinate plane
DATA ANALYSIS, PROBABILITY AND DISCRETE MATH			
27.	Determine the most appropriate measure of central tendency for a set of data based on its distribution (D-1-H)	HA1-540	Finding the mode, median, and mean from data and frequency distribution tables
28.	Identify trends in data and support conclusions by using distribution characteristics such as patterns, clusters, and outliers (D-1-H) (D-6-H) (D-7-H)	HA1-885 HA1-877	885-Histograms and the Normal Distribution Drawing inferences and making predictions from tables and graphs
29.	Create a scatter plot from a set of data and determine if the relationship is linear or nonlinear (D-1-H) (D-6-H) (D-7-H)	HA1-892 HA1-965	Data analysis using the graphing calculator Determining the best-fitting line

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30.	Use simulations to estimate probabilities (D-3-H) (D-5-H)	MPA-090	Find the probability of simple real-life events
31.	Define probability in terms of sample spaces, outcomes, and events (D-4-H)	HA1-560	Determining probability of an event and complement from a random experiment
32.	Compute probabilities using geometric models and basic counting techniques such as combinations and permutations (D-4-H)	HA1-879	Applying counting techniques to permutations and combinations
33.	Explain the relationship between the probability of an event occurring, and the odds of an event occurring and compute one given the other (D-4-H)	HA1-565	Solving problems involving ind., dep., and mutually exclusive and inclusive events
34.	Follow and interpret processes expressed in flow charts (D-8-H)	MPA-006	Determining Reasonableness of Answers and Appropriate Methods of Computation
PATTERNS, RELATIONS AND FUNCTIONS			
35.	Determine if a relation is a function and use appropriate function notation (P-1-H)	HA1-437	Identifying relations as functions
		HA1-439	Using function notation
36.	Identify the domain and range of functions (P-1-H)	HA1-438	Finding the domain and range of functions
37.	Analyze real-life relationships that can be modeled by linear functions (P-1-H) (P-5-H)	HA1-955	Analyzing linear functions
		HA1-401	How variations of "m" and "b" affect the graph of $y = mx + b$
		HA1-382	Solving linear equations using the graphing calculator
38.	Identify and describe the characteristics of families of linear functions, with and without technology (P-3-H)	HA1-401	How variations of "m" and "b" affect the graph of $y = mx + b$
39.	Compare and contrast linear functions algebraically in terms of their rates of change and intercepts (P-4-H)	HA1-401	How variations of "m" and "b" affect the graph of $y = mx + b$
40.	Explain how the graph of a linear function changes as the coefficients or constants are changed in the function's symbolic representation (P-4-H)	HA1-382	Solving linear equations using the graphing calculator

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

Note: Standards were taken from the Louisiana Grade Level Expectations for Algebra I document adopted by the Louisiana State Board of Education