



8th Grade Correlation to Assessment Framework

	Mathematics Curriculum Framework	Lesson Number	Lesson Title
By the beginning of 8 th grade, students should know the following:			
MATHEMATICAL PROCESSES			
A.8	Students will effectively use mathematical knowledge, skills and strategies related to reasoning, communication, connections, representation and problem solving.		
A.8.1	Use reasoning and logic to: <ul style="list-style-type: none"> Perceive patterns 	MPA-104 HA1-447 Throughout	Recognizing Patterns Identifying Number Patterns
	<ul style="list-style-type: none"> Identify relationships Formulate questions Pose problems Make conjectures 	Throughout Throughout Throughout Throughout	
	<ul style="list-style-type: none"> Justify strategies 	MPA-006 MPA-007 Throughout MPA-007 Throughout	Determining Reasonableness of Answers and Appropriate Method of Computation Solving Problems Using Logical Reasoning Skills Solving Problems Using Logical Reasoning Skills
	<ul style="list-style-type: none"> Test reasonableness of results 	MPA-006 Throughout	Determining Reasonableness of Answers and Appropriate Method of Computation
A.8.2	Communicate mathematical ideas and logical reasoning using the vocabulary of mathematics in a variety of ways e.g., using words, numbers, symbols, pictures, charts, tables, diagrams, graphs, and models.	Throughout	
A.8.3	Connect mathematics to the real world, as well as within mathematics.	Throughout	
A.8.4	Create and use representations to organize, record, and communicate mathematical ideas.	Throughout	
A.8.5	Solve and analyze routine and non-routine problems.	Throughout	
NUMBER OPERATIONS AND RELATIONSHIPS			
B.8.a.1	Recognize and apply place-value concepts to numbers less than 100,000,000 with decimals to the thousandths place.	MPA-001	Identifying, Comparing, and Ordering Whole Numbers Through Billions
		MPA-015	Identifying the Place Value of Decimals Through Thousandths
B.8.a.2	Read, write and represent numbers using words, numerals, number lines, arrays, and expanded form ($12.09=10+2+.09$) and symbolic renaming ($12.09=13-.91$).	MM1-005	Writing Numbers in Expanded Form
		MM1-001	Identifying Place Value to the Billions
		MM1-570	Identifying Integers and Absolute Value
		MM1-575	Comparing and Ordering Integers
		MPA-043	Reading and Writing Integers

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		MPA-045	Comparing and Ordering Integers
		MPA-015	Identifying the Place Value of Decimals Through Thousandths
		Throughout	
B.8.a.3	Compare and order a set of fractions or decimals (to the hundredths place) and use symbols (<, >, =, ≠).	MPA-016	Comparing and Ordering Decimals
		MPA-031	Comparing and Ordering Fractions and Decimals
B.8.a.4	Identify and use number theory concepts: <ul style="list-style-type: none"> • prime and composite numbers 	MPA-025	Identifying Prime and Composite Numbers
		HA1-265	Writing a Number in Prime Factorization and Finding the Greatest Common Factor
	<ul style="list-style-type: none"> • divisibility potential of numbers (divisors of 1-10, 25, and multiples of 10). 	MPA-020	Multiplying Decimals by Powers of Ten
		MPA-024	Using Divisibility Rules
	<ul style="list-style-type: none"> • least common multiples 	MPA-030	Finding Least Common Multiple of Two or More Numbers
	<ul style="list-style-type: none"> • greatest common factor of two numbers 	MPA-027	Finding the Greatest Common Factor
		HA1-265	Writing a Number in Prime Factorization and Finding the Greatest Common Factor
B.8.a.5	Demonstrate understanding of fractions and percents with and without contexts (e.g., sales tax and discounts, 40 is 25 percent of what number?; What number is 25 percent of 160?)	MPA-083	Finding Number Given Percent and Total
		MPA-084	Finding Percent Given Number and Total
		MPA-085	Finding Total Given Number and Percent
		MPA-034	Adding and Subtracting Fractions
		MPA-035	Adding and Subtracting Mixed Numbers with Unlike Denominators
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
		MPA-037	Dividing Fractions and Mixed Numbers and Simplifying
B.8.a.6	Apply proportional reasoning to a variety of problem situations. (E.g. comparisons, rates, and similarities).	MPA-079	Unit rates
		MPA-080	Solving Proportions
		MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
B.8.a.7	Identify equivalent forms of fractions, decimals and percents.	MPA-029	Converting Fractions and Decimals
		MPA-078	Expressing Ratios as Fractions and Determining Equivalency
		MPA-081	Converting Fractions, Decimals, and Percents I
		MPA-082	Converting Fractions, Decimals, and Percents II
B.8.b.1	Use all operations in everyday situations to solve single or multi-step word problems.	Throughout	
B.8.b.2	Solve problems involving percents with and without context.	MPA-083	Finding Number Given Percent and Total
		MPA-084	Finding Percent Given Number and Total
		MPA-085	Finding Total Given Number and Percent
		MPA-086	Solving Problems Using Percent
		MPA-087	Finding Percent Increase and Decrease
		MPA-126	Solving Real-World Problems Involving Sales Tax
		MPA-127	Solving Real-World Problems Involving Discounts
		MPA-128	Solving Real-World Problems Involving Simple Interest
		MPA-088	Solving Real-World Problems Involving Percent
		HA1-165	Using Equations to Solve Percent Problems
		HA1-170	Solving Percent of Change Problems
B.8.b.3	Add and subtract decimals including thousandths with and without context.	MPA-018	Adding and Subtracting Decimals
B.8.b.4	Multiply decimals and integers (-100 to 100) including thousandths with and without context. (Ex. interest rates)	MPA-019	Multiplying Decimals
		MPA-020	Multiplying Decimals by Powers of Ten
		MPA-051	Multiplying Integers with Like and Unlike Signs

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		MPA-122	Modeling Multiplication and Division of Decimals
B.8.b.5	Divide decimals and integers in problems with and without context.	MPA-022	Dividing Decimals
		MPA-052	Dividing Integers with Like and Unlike Signs
		MPA-119	Dividing Decimals (an Introduction)
		MPA-122	Modeling Multiplication and Division of Decimals
B.8.b.6	Demonstrate understanding of the concept of division of fractions in a contextual setting.	MPA-037	Dividing Fractions and Mixed Numbers and Simplifying
		MPA-123	Modeling Multiplication and Division of Fractions
B.8.b.8	Add and subtract mixed numbers and fractions with unlike denominators, multiply mixed numbers.	MPA-034	Adding and Subtracting Fractions
		MPA-035	Adding and Subtracting Mixed Numbers with Unlike Denominators
		MPA-036	Multiplying Fractions and Mixed Numbers and Simplifying
B.8.b.7	Estimate the sum, difference and product of whole numbers, common fractions, mixed numbers and decimals to thousandths.	MPA-004	Using Rounding to Estimate
		MPA-005	Estimating Products and Quotients Using Patterns
		MPA-017	Rounding Decimals and Estimating Computations Using Decimals
		MPA-023	Rounding Quotients Involving Decimals
		MPA-033	Estimating Computations with Fractions and Mixed Numbers
B.8.b.9	Determine reasonableness of answers.	MPA-006	Determining Reasonableness of Answers and Appropriate Method of Computation
GEOMETRY			
C.8.a.1	Name 3-dimensional figures (e.g., rectangular prisms, square pyramids, cones, cylinders and spheres.)	MPA-072	Identifying 3-D Figures
C.8.a.2	Find the measure of the third angle of a triangle when given the measures of two interior or exterior angles.	MPA-057	Identifying and Applying Supplementary and Complementary Angles
C.8.a.3	Determine the sum of the angles of a polygon using diagonals drawn from one vertex.	Grade Level Content Under Review	
C.8.a.4	Determine the measure of an angle in a drawing of an adjacent and supplementary or adjacent and complementary pair of angles when given the measure of the other angle.	MPA-057	Identifying and Applying Supplementary and Complementary Angles
		HA1-889	Complementary and Supplementary Angles
C.8.b.1	Draw and/or describe a similar figure when given a polygon drawn on graph paper with vertices at lattice points.	Grade Level Content Under Review	
C.8.b.2	Identify figures that are congruent and/or similar.	MPA-058	Identifying Polygons
		MPA-059	Classifying Triangles and Quadrilaterals
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
C.8.b.3	Demonstrate understanding of similarity by finding the relationship between the sides of two figures.	MPA-121	Identifying Similar and Congruent Polygons Using Proportions
C.8.b.4	Draw or identify the image of a figure based on one or more transformations (reflection, rotation and/or translation).	MM1-500	Using Translations, Rotations and Reflections to Transform Shapes
		MPA-108	Graphing Translations and Reflections on the Coordinate Plane
C.8.b.5	Design symmetrical shapes. Draw or identify lines of symmetry.	Future Release Lesson	HGM142 Investigating Symmetry of Polygons
		Grade Level Content Under Review	
C.8.b.6	Classify figures possessing line symmetry only; line and rotation symmetry; rotational symmetry only; no symmetry.	Grade Level Content Under Review	
C.8.b.7	Identify and describe 3-dimensional figures from multiple perspectives.	MPA-072	Identifying 3-D Figures
		MPA-106	Identifying a Solid Figure From a Net
		MPA-107	Constructing Three-Dimensional Figures and Examining Their Dimensions

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C.8.c.1	Identify, locate, plot coordinates in all four quadrants; draw or identify the reflection of a point across the x- or y-axis or the translation of a point at integer coordinates in any of the four quadrants.	HA1-893 MPA-046	Constructing Solids from Different Perspectives Graphing Points on a Coordinate Plane
C.8.c.2	Locate or plot coordinates in any of the four quadrants using a geometric figure (e.g., transformations).	MPA-108 MPA-109	Graphing Translations and Reflections on the Coordinate Plane Graphing Translations and Reflections on the Coordinate Plane
MEASUREMENT			
D.8.a.1	Select the appropriate unit of measure (U.S. customary and metric) to estimate the length, liquid capacity, volume, time, and weight/mass of everyday objects.	MPA-130	Developing a Sense of Relative Sizes of Measures
D.8.a.2	Convert units within a system e.g., feet to yards; ounces to pounds; inches to feet; pints to quarts. Approximate conversions of units between metric and U.S. customary systems using a model or in context (quart/liter; yard/meter).	MPA-061	Converting Metric Units of Length, Capacity, and Mass
		MPA-062	Converting Units in Customary System
		MPA-063	Converting Units Between Metric and Customary System
D.8.b.1	Apply appropriate tools techniques to measure down to the nearest 1/4-, 1/8- or 1/16-inch or nearest centimeter or millimeter.	MPA-130	Developing a Sense of Relative Sizes of Measures
D.8.b.2	Determine and compare elapsed time in problem-solving situations.	MM1-555	Determining Elapsed Time from A.M. to P.M. and P.M. to A.M.
		MM1-560	Identifying Time Zones and Determining Elapsed Time Between Zones
D.8.b.3	Measure and/or draw angles up to 360 degrees.	MM1-460	Measuring and Classifying Angles
D.8.c.1	Estimate area given a reference.	MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-069	Finding the Area of Triangles and Trapezoids
		MPA-071	Finding the Area of a Circle
D.8.c.2	Determine perimeter/circumference and area of polygons and circles with and without context.	MPA-055	Finding the Perimeter of a Figure
		MPA-067	Finding the Area of Rectangles and Parallelograms
		MPA-069	Finding the Area of Triangles and Trapezoids
		MPA-070	Finding the Circumference of a Circle
		MPA-071	Finding the Area of a Circle
D.8.c.3	Determine the distance between points using a scale.	MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
D.8.c.4	Determine volume and surface area of cylinders, rectangular prisms and pyramids with base shapes of triangle, square, regular pentagon and regular hexagon in real-world context.	MPA-073	Finding the Surface Area of Rectangular Prisms
		MPA-074	Finding the Surface Area of Cylinders
		MPA-075	Finding the Volume of Rectangular Prisms
		MPA-076	Finding the Volume of Cylinders
		MPA-115	Finding the Volumes of Prisms, Cylinders, Pyramids, and Cones Using Models
D.8.c.5	Draw similar figures in any shape using a scale factor (e.g., enlarge/shrink).	MPA-120	Applying Dilations in the Coordinate Plane
D.8.c.6	Use ratio and proportion in context.	MPA-079	Unit rates
		MPA-080	Solving Proportions
		MPA-110	Solving Problems Using Proportions, Scale Drawings, Models, and Maps
		MPA-121	Identifying Similar and Congruent Polygons Using Proportions
D.8.c.7	Use $d = r \cdot t$ formula in simple contexts.	MPA-077	Solving Problems Using a Formula
		HA1-160	Writing an Equation to Solve Distance, Rate, and Time Problems
STATISTICS AND PROBABILITY			
E.8.a.1	Compare two sets of data to generate or confirm/deny hypotheses.	Grade Level Content Under Review	
E.8.a.2	Extract, interpret and analyze data including multiple representations	MM1-400	Interpreting Double Bar Graphs

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	of the same data from tables, double back-to-back stem-and-leaf plots, double bar graphs, simple circle graphs, line plots, line graphs, charts and diagrams with and without context.		
		MM1-405	Interpreting and Constructing Circle Graphs
		MPA-092	Reading and Interpreting Bar, Line, and Circle Graphs
		MPA-093	Choosing Appropriate Scales and Intervals for Data
		MPA-094	Interpreting and Constructing Line Plots
		MPA-096	Constructing Stem-and-Leaf Plots
		MPA-129	Choosing Appropriate Scales and Intervals for Data (an Introduction)
E.8.a.3	Create graphs with one-variable data sets using back-to-back stem-and-leaf plots, double bar graphs, circle graphs, line plots and line graphs; discuss appropriateness of graph selected.	MM1-400	Interpreting Double Bar Graphs
		MM1-405	Interpreting and Constructing Circle Graphs
		MPA-093	Choosing Appropriate Scales and Intervals for Data
		MPA-094	Interpreting and Constructing Line Plots
		MPA-096	Constructing Stem-and-Leaf Plots
		MPA-129	Choosing Appropriate Scales and Intervals for Data (an Introduction)
E.8.a.4	Find mean, median (with odd or even number of data), mode and range of a set of data with and without context.	HA1-540	Finding the Mean, Median, and Mode from Data and Frequency Distribution Tables
		HA1-541	Analyzing Data Using the Measures of Central Tendency and the Range
E.8.a.5	Evaluate sources of data in context and multiple representations of a given data set.	MM1-385	Collecting Data
		MPA-098	Making Predictions from Graphs and Choosing the Correct Graph
E.8.a.6	Compare two sets of data to generate or confirm/deny hypotheses.	Grade Level Content Under Review	
E.8.b.1	Determine the likelihood of an event and probability based on one or two dependent or independent events.	MPA-090	Finding the Probability of Simple Real-Life Events
		MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
		MPA-113	Finding the Probability of Compound Events Through Experimentation
		MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model
		HA1-560	Determining Probability of an Event and Complementary Event from a Random Experiment
E.8.b.2	Use probabilities to estimate outcomes and evaluate fair and unfair simple events.	MPA-089	Using Tree Diagrams
		MPA-090	Finding the Probability of Simple Real-Life Events
		HA1-560	Determining Probability of an Event and Complementary Event from a Random Experiment
E.8.b.3	Use data from simulations provided in charts/tables to solve and interpret probability problems.	MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model
		HA1-560	Determining Probability of an Event and Complementary Event from a Random Experiment
E.8.b.4	Determine the number of arrangements from a set of 5 or less. Ex: How many different ways could 5 students stand in line?	HA1-879	Applying Counting Techniques to Permutations and Combinations
E.8.b.5	Solve problems involving sample spaces or diagrams.	MPA-089	Using Tree Diagrams
		MPA-112	Constructing Sample Spaces for Compound Events (Dependent and Independent)
E.8.b.6	Analyze outcomes based on an understanding of theoretical and experimental probability.	MPA-114	Finding the Odds of Events and Experimental Probability from a Math Model
ALGEBRAIC RELATIONSHIPS			
F.8.a.1	Use two concurrent numeric patterns to describe and analyze functional relationships between two variables.	HA1-448	Finding the nth Term of a Pattern
		Grade Level Content Under Review	
F.8.a.2	Describe and analyze in words functional relationships in two concurrent numeric patterns using multiplication and exponents and	HA1-448	Finding the nth Term of a Pattern

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	describe the relationship in words.	Grade Level Content Under Review	
F.8.a.3	Extend an increasing or decreasing arithmetic or geometric pattern.	HA1-447	Identifying Number Patterns
F.8.a.4	Describe and interpret linear patterns in tables and graphs.	HA1-965	Determining the Best-Fitting Line
F.8.a.5	Identify the rule to complete or extend a function table or any combination of the two using one or two operations (+, -, x, ÷) and numbers (-100 through 100) in the function table.	HA1-439	Using Function Notation
		Grade Level Content Under Review	
F.8.a.6	Describe real-world phenomena represented by a graph. Describe real-world phenomena that a given graph might represent.	Grade Level Content Under Review	
F.8.a.7	Justify the accuracy of the chosen item in a sequence.	Grade Level Content Under Review	
F.8.b.1	Solve single-variable inequalities using symbols.	HA1-185	Solving Inequalities Using the Addition and Subtraction Properties
		HA1-190	Solving Inequalities Using the Multiplication and Division Properties
		HA1-195	Solving Inequalities Using More Than One Property
F.8.b.2	Solve single-variable one- and two-step equations with whole number, whole number integer, or rational, coefficients with and without context.	HA1-115	Using the Addition and Subtraction Properties for Equations
		HA1-120	Using the Multiplication and Division Properties for Equations
		HA1-382	Solving Linear Equations Using the Graphing Calculator
F.8.b.3	Find values of expressions with one variable and up to two operations including basic operations and exponents.	HA1-005	Evaluating Algebraic Expressions
		HA1-060	Evaluating Expressions Using the Order of Operations
		HA1-065	Evaluating Expressions Containing Exponents
		HA1-075	Simplifying Algebraic Expressions by Combining Like Terms
		HA1-076	Basic Distributive Property
		HA1-085	Simplifying Expressions Using the Properties of Real Numbers
F.8.b.4	Solve two-step multi-operation equations with letter variables and whole number or integer coefficients with and without context. Ex: $-3x + 1 =$.	HA1-125	Solving Equations Using More Than One Property
		HA1-140	Solving Equations by Combining Like Terms
		HA1-145	Solving Equations with Variables on Both Sides
F.8.b.5	Write an algebraic expression (with one or two operations) which generalizes a linear pattern.	HA1-095	Translating Word Phrases into Algebraic Expressions
F.8.b.6	Create a corresponding algebraic expression when given an arithmetic operation/relationship expressed in words.	HA1-095	Translating Word Phrases into Algebraic Expressions
F.8.b.7	Evaluate formulas with and without context by solving for a specified variable.	MPA-077	Solving Problems Using a Formula
		HA1-135	Evaluating Formulas
		HA1-175	Solving Literal Equations
F.8.c.1	Identify a pair of equivalent numerical or one-variable expressions when using commutative or associative properties with addition and multiplication.	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
		HA1-085	Simplifying Expressions Using the Properties of Real Numbers
		HA1-130	Identifying Postulates, Theorems, and Properties
F.8.c.2	Demonstrate understanding of up to four-step order of operations expression using parentheses, exponents and fraction symbol.	HA1-003	Order of Operations

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F.8.c.3	Demonstrate understanding of distributive property without variables.	MPA-002	Adding, Subtracting, Multiplying, and Dividing Whole Numbers
F.8.c.4	Solve order of operations problems with one variable to demonstrate understanding of commutativity and associativity.	HA1-085	Simplifying Expressions Using the Properties of Real Numbers

MM1-Fundamentals of Mathematics

MPA- Pre-Algebra

HA1-Algebra 1

Note: Standards were taken from the Wisconsin WKCE-CRT Mathematics Framework document adopted by the Wisconsin Department of Public Instruction on January, 2005.