

# MATHEMATICS - GRADE 9

## Comparison of the 2021 Grade 9 Mathematics Course (MTH1W) and the 2005 Mathematics Courses by Topic

The cells shaded under the column labelled '**Same/Modified**' indicates how the 2021 Mathematics course is the same or modified from the 2005 Mathematics courses. The cells shaded under the column labelled '**Removed**' indicates topics that were removed from the 2005 Mathematics courses and are not in the 2021 Mathematics course. The cells shaded under the column labelled '**Added**' indicates topics that were not in the 2005 Mathematics courses and are in the 2021 Mathematics course.

Topic	Courses	Same/Modified	Removed	Added
<b>Curriculum Context</b>				
<b>Introduction</b>		<ul style="list-style-type: none"> <li>• Roles and Responsibilities                             <ul style="list-style-type: none"> <li>○ Students</li> <li>○ Parents</li> <li>○ Teachers</li> <li>○ Principals</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The place of Mathematics in the Curriculum</li> </ul>	<ul style="list-style-type: none"> <li>• Vision and Goals</li> <li>• The importance and Beauty of Mathematics</li> <li>• Principles underlying the Ontario Mathematics Curriculum</li> </ul>
<b>Human Rights, Equity and Inclusive Education in Mathematics</b>		<ul style="list-style-type: none"> <li>• Now includes Human Rights, Equity and Inclusive Education in Mathematics</li> </ul>		<ul style="list-style-type: none"> <li>• Explicit language on creating anti-racist and anti-discriminatory learning environments</li> </ul>

Topic	Courses	Same/Modified	Removed	Added
				<ul style="list-style-type: none"> <li>Culturally Responsive and Relevant Pedagogy in Mathematics</li> </ul>
<b>Some Considerations for Program Planning in Mathematics</b>			<ul style="list-style-type: none"> <li>Teaching Approaches</li> <li>Planning Mathematics Program for Exceptional Students</li> <li>English As a Second Language and English Literacy Development (ESL/ELD)</li> </ul>	<ul style="list-style-type: none"> <li>Instructional Approaches in Mathematics, including Universal Design for Learning, differentiated instruction, “low floor high ceiling” tasks, and High-impact practices</li> <li>The Role of Information and Communication Technology in Mathematics</li> <li>Education and Career/Life Planning</li> <li>Planning mathematics programs for students with special education needs</li> <li>Planning mathematics programs for English language learners</li> </ul>
<b>Assessment and Evaluation of Student Achievement</b>		<ul style="list-style-type: none"> <li>Updated the Achievement Chart for Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>Basic Considerations</li> </ul>	<ul style="list-style-type: none"> <li>Alignment with <a href="#">“Growing Success: Assessment, Evaluation, and Reporting in Ontario Schools, First Edition, Covering Grades 1 to 12, 2010”</a></li> <li>Culturally Responsive and Relevant Assessment and Evaluation in Mathematics</li> </ul>
<b>Elements in Grade Mathematics Course</b>		<ul style="list-style-type: none"> <li>Now includes updated: <ul style="list-style-type: none"> <li>Table for course in Mathematics, Grades 9 to 12</li> <li>Prerequisites Chart for Mathematics, Grades 9 to 12</li> </ul> </li> </ul>		
<b>Social-Emotional Learning Skills</b>	MPM1D (EN) MPM1D (FR)			<ul style="list-style-type: none"> <li>Applying SEL Skills and the mathematical processes is an explicit overall expectation. SEL</li> </ul>

Topic	Courses	Same/Modified	Removed	Added
	MFM1P (EN) MFM1P (FR)			is in its own strand and is to be instructed and not assessed, evaluated or reported on.
<b>The Mathematical Processes</b>	MPM1D (EN)	<ul style="list-style-type: none"> <li>Now included as an overall expectation</li> </ul>		
	MPM1D (FR)	<ul style="list-style-type: none"> <li>Now included as an overall expectation               <ul style="list-style-type: none"> <li>The reasonableness of answers is a part of this</li> <li>Use of proper terminology and use of mathematical symbols is a part of this</li> </ul> </li> </ul>		
	MFM1P (EN)	<ul style="list-style-type: none"> <li>Now included as an overall expectation</li> </ul>		
	MFM1P (FR)	<ul style="list-style-type: none"> <li>Now included as an overall expectation               <ul style="list-style-type: none"> <li>The reasonableness of answers is a part of this</li> <li>Use of proper terminology and use of mathematical symbols is a part of this</li> </ul> </li> </ul>		
<b>Making Connections</b>	MPM1D (EN)			<ul style="list-style-type: none"> <li>Now an overall expectation to be done in connection to the other strands throughout the course.</li> <li>Make connections between mathematics and various knowledge systems, their lived experiences, and various real-life applications of mathematics, including careers</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			

Topic	Courses	Same/Modified	Removed	Added
<b>Number Sense and Operations</b>				
Development and use of numbers by various cultures	MPM1D (EN)			<ul style="list-style-type: none"> <li>Now a specific expectation</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Number Sense	MPM1D (EN)			<ul style="list-style-type: none"> <li>Concepts added include Comparing Number Sets, Density of numbers, Infinity, Limit</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Powers	MPM1D (EN)	<ul style="list-style-type: none"> <li>Understanding powers with numbers before working with algebraic expressions</li> <li>Evaluating and simplifying powers with positive exponents</li> <li>Squares and square roots as applications</li> </ul>	<ul style="list-style-type: none"> <li>Relationship between the algebraic and geometric representations of a single-variable term up to degree three</li> </ul>	<ul style="list-style-type: none"> <li>Evaluating and simplifying powers with zero and negative exponents</li> <li>Express in scientific notation</li> </ul>
	MPM1D (FR)	<ul style="list-style-type: none"> <li>Evaluating and simplifying powers with positive exponents</li> <li>Exponent rules</li> <li>Zero and negative exponent</li> </ul>		<ul style="list-style-type: none"> <li>Express in scientific notation</li> <li>Simplifying powers with zero and negative exponents</li> </ul>

Topic	Courses	Same/Modified	Removed	Added
	MFM1P (EN)	<ul style="list-style-type: none"> <li>Squares and square roots as applications</li> </ul>	<ul style="list-style-type: none"> <li>Relationship between the algebraic and geometric representations of a single-variable term up to degree three</li> </ul>	<ul style="list-style-type: none"> <li>Understanding powers with numbers before working with algebraic expressions</li> <li>Evaluating and simplifying exponents that are positive, zero, and negative</li> <li>Express in scientific notation</li> </ul>
	MFM1P (FR)			<ul style="list-style-type: none"> <li>Understanding powers with numbers before working with algebraic expressions</li> <li>Evaluating and simplifying exponents that are positive, zero, and negative</li> <li>Express in scientific notation</li> </ul>
Integers	MPM1D (EN)	<ul style="list-style-type: none"> <li>Simplifying numerical expressions with integers</li> </ul>		<ul style="list-style-type: none"> <li>Integers now connected to various applications including location, direction, amounts, etc.</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Fractions	MPM1D (EN)	<ul style="list-style-type: none"> <li>Simplify expressions involving rational numbers</li> </ul>		<ul style="list-style-type: none"> <li>Understanding positive and negative fractions</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)	<ul style="list-style-type: none"> <li>Understanding positive and negative fractions</li> <li>Simplify expressions involving rational numbers</li> </ul>		
Percentages, ratios, rates, and proportions	MPM1D (EN)	<ul style="list-style-type: none"> <li>Solve problems that involve percent, ratios, rates, and proportions</li> </ul>		<ul style="list-style-type: none"> <li>Understanding connection to fractions and decimal numbers</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			

Topic	Courses	Same/Modified	Removed	Added
	MFM1P (FR)			
<b>Algebraic Expressions and Equations</b>				
Development and use of algebra concepts by various cultures	MPM1D (EN)			<ul style="list-style-type: none"> <li>Now a specific expectation</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Algebraic expressions	MPM1D (EN)	<ul style="list-style-type: none"> <li>Evaluate algebraic expressions as applications within the course</li> <li>Add and subtract polynomials as part of simplifying expressions</li> <li>Multiplying polynomial by monomial part of simplifying expressions</li> <li>Expand and simplify polynomials as part of simplifying expressions</li> </ul>		<ul style="list-style-type: none"> <li>Create algebraic expressions given various representations</li> <li>Comparing algebraic expressions to determine ones that are equivalent</li> </ul>
	MPM1D (FR)	<ul style="list-style-type: none"> <li>Evaluate algebraic expressions as applications within the course</li> <li>Add and subtract polynomials as part of simplifying expressions</li> <li>Multiplying polynomial by monomial part of simplifying expressions</li> <li>Expand and simplify polynomials as part of simplifying expressions</li> </ul>		<ul style="list-style-type: none"> <li>Create algebraic expressions given various representations</li> <li>Comparing algebraic expressions to determine ones that are equivalent</li> </ul>
	MFM1P (EN)	<ul style="list-style-type: none"> <li>Evaluate algebraic expressions as applications within the course</li> </ul>		<ul style="list-style-type: none"> <li>Expand and simplify polynomials as part of simplifying expressions</li> </ul>

Topic	Courses	Same/Modified	Removed	Added
		<ul style="list-style-type: none"> <li>Add and subtract polynomials as part of simplifying expressions with no limitation on the degrees</li> <li>Multiplying polynomial by monomial part of simplifying expressions with no limitation on the degrees</li> </ul>		<ul style="list-style-type: none"> <li>Create algebraic expressions given various representations</li> <li>Comparing algebraic expressions to determine ones that are equivalent</li> </ul>
	MFM1P (FR)	<ul style="list-style-type: none"> <li>Evaluate algebraic expressions as applications within the course</li> <li>Add and subtract polynomials as part of simplifying expressions with no limitation on the degrees</li> <li>Multiplying polynomial by monomial part of simplifying expressions with no limitation on the degrees</li> <li>Expand and simplify polynomials as part of simplifying expressions with no limitations on degrees</li> </ul>		<ul style="list-style-type: none"> <li>Create algebraic expressions given various representations</li> <li>Comparing algebraic expressions to determine ones that are equivalent</li> </ul>
Equations	MPM1D (EN)	<ul style="list-style-type: none"> <li>Solving equations not limited to first-degree (e.g., solving for a side of a right triangle, measurement problems involving squares and cubes)</li> </ul>	<ul style="list-style-type: none"> <li>Rearrange equation to solve, is a strategy in pedagogical supports</li> </ul>	
	MPM1D (FR)			
	MFM1P (EN)	<ul style="list-style-type: none"> <li>Solving equations not limited to first-degree (e.g., solving for a side of a right triangle, measurement problems involving squares and cubes) and not limited to just whole numbers – depends on the contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Substitute in and then solve for a variable included as a strategy in pedagogical supports</li> </ul>	
	MFM1P (FR)	<ul style="list-style-type: none"> <li>Solving equations not limited to first-degree and not limited to whole numbers</li> </ul>		

Topic	Courses	Same/Modified	Removed	Added
<b>Coding</b>				
Use code to understand variables, parameters, equations, and inequalities	MPM1D (EN)			<ul style="list-style-type: none"> <li>Now a specific expectation</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Create code	MPM1D (EN)			<ul style="list-style-type: none"> <li>Now a specific expectation</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Read and alter code	MPM1D (EN)			<ul style="list-style-type: none"> <li>Now a specific expectation</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
<b>Relations</b>				
Real-life applications of Linear and Non-linear relations	MPM1D (EN)	<ul style="list-style-type: none"> <li>Interpolate and extrapolate information from a graph of a linear relation</li> <li>Create a representation given a realistic situation</li> </ul>	<ul style="list-style-type: none"> <li>Identifying and explaining any restrictions on the variables in a linear relation</li> </ul>	<ul style="list-style-type: none"> <li>Making connections to growing and shrinking patterns</li> <li>Make predictions of non-linear relations from a graph</li> </ul>



Topic	Courses	Same/Modified	Removed	Added
			<ul style="list-style-type: none"> <li>describe a situation that would explain the events illustrated by a given graph of a relationship between two variables</li> </ul>	
	MPM1D (FR)	<ul style="list-style-type: none"> <li>Interpolate and extrapolate information from a graph of a linear relation</li> <li>Connections between table of values, graphs and equations for realistic situations</li> <li>Create a representation given a realistic situation</li> </ul>	<ul style="list-style-type: none"> <li>Using "fonction affine" to explain relations</li> <li>Explain broken line distance/time graphs</li> </ul>	<ul style="list-style-type: none"> <li>Making connections to growing and shrinking patterns</li> <li>Make predictions of non-linear relations from a graph</li> </ul>
	MFM1P (EN)	<ul style="list-style-type: none"> <li>Interpolate and extrapolate information from a graph of a linear relation</li> <li>Create a representation given a realistic situation</li> </ul>	<ul style="list-style-type: none"> <li>describe a situation that would explain the events illustrated by a given graph of a relationship between two variables</li> </ul>	<ul style="list-style-type: none"> <li>Making connections to growing and shrinking patterns</li> <li>Make predictions of non-linear relations from a graph</li> </ul>
	MFM1P (FR)	<ul style="list-style-type: none"> <li>Interpolate and extrapolate information from a graph of a linear relation</li> <li>Connections between table of values, graphs and equations for realistic situations</li> <li>Create a representation given a realistic situation</li> </ul>	<ul style="list-style-type: none"> <li>Using "fonction affine" to explain relations</li> <li>Explain broken line distance/time graphs</li> </ul>	<ul style="list-style-type: none"> <li>Making connections to growing and shrinking patterns</li> <li>Make predictions of non-linear relations from a graph</li> </ul>
Characteristics of Linear and Non-Linear Relations	MPM1D (EN)	<ul style="list-style-type: none"> <li>Characteristics of the graphs for <math>x = k</math>, <math>y = k</math>, <math>x + y = k</math>, <math>x - y = k</math>, <math>ax + by = k</math></li> <li>Identify initial values of a linear relation</li> <li>Identify rate of change of a linear relation from different representations</li> <li>Connections between rate of change and slope</li> <li>Connections between initial value and y-intercept</li> <li>Part of pedagogical support</li> </ul>	<ul style="list-style-type: none"> <li>Comparing the properties of direct and partial variation</li> <li>Formal use of the formula for the slope of a line</li> <li>Formal work on properties of slopes of lines</li> </ul>	<ul style="list-style-type: none"> <li>Characteristics of the graph <math>xy = k</math></li> <li>Characteristics of the graphs of the associated inequalities for <math>x = k</math>, <math>y = k</math>, <math>x + y = k</math>, <math>x - y = k</math>, <math>ax + by = k</math>, and <math>xy = k</math>,</li> </ul>

Topic	Courses	Same/Modified	Removed	Added
		<ul style="list-style-type: none"> <li>○ First differences part of pedagogical support</li> <li>○ Classifying relations according to the shape of its graph</li> <li>○ Connecting the degree of the equation to the type of relation</li> </ul>		
	MPM1D (FR)	<ul style="list-style-type: none"> <li>● Characteristics of the graphs for <math>x = k</math>, <math>y = k</math>, <math>x + y = k</math>, <math>x - y = k</math>, <math>ax + by = k</math></li> <li>● Identify initial values of a linear relation</li> <li>● Identify rate of change of a linear relation from different representations</li> <li>● Connections between rate of change and slope</li> <li>● Connections between initial value and y-intercept</li> <li>● Part of pedagogical support               <ul style="list-style-type: none"> <li>○ First differences part of pedagogical support</li> <li>○ Classifying relations according to the shape of its graph</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Comparing the properties of direct and partial variation</li> </ul>	<ul style="list-style-type: none"> <li>● Characteristics of the graph <math>xy = k</math></li> <li>● Characteristics of the graphs of the associated inequalities for <math>x = k</math>, <math>y = k</math>, <math>x + y = k</math>, <math>x - y = k</math>, <math>ax + by = k</math>, and <math>xy = k</math>,</li> <li>● Part of pedagogical support               <ul style="list-style-type: none"> <li>○ Connecting the degree of the equation to the type of relation</li> </ul> </li> </ul>
	MFM1P (EN)	<ul style="list-style-type: none"> <li>● Identify initial values of a linear relation</li> <li>● Identify rate of change of a linear relation from different representations</li> <li>● Connections between initial value and y-intercept</li> <li>● Part of pedagogical support               <ul style="list-style-type: none"> <li>○ First differences part of pedagogical support</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Comparing the properties of direct and partial variation</li> </ul>	<ul style="list-style-type: none"> <li>● Characteristics of the graphs for <math>x = k</math>, <math>y = k</math>, <math>x + y = k</math>, <math>x - y = k</math>, <math>ax + by = k</math>, and <math>xy = k</math>, and their associated inequalities</li> <li>● Connections between rate of change and slope</li> <li>● Part of pedagogical support               <ul style="list-style-type: none"> <li>○ Classifying relations according to the shape of its graph</li> <li>○ Connecting the degree of the equation to the type of relation</li> </ul> </li> </ul>
	MFM1P (FR)	<ul style="list-style-type: none"> <li>● Identify initial values of a linear relation</li> <li>● Identify rate of change of a linear relation from different representations</li> <li>● Connections between rate of change and slope</li> </ul>	<ul style="list-style-type: none"> <li>● Comparing the properties of direct and partial variation</li> </ul>	<ul style="list-style-type: none"> <li>● Characteristics of the graphs for <math>x = k</math>, <math>y = k</math>, <math>x + y = k</math>, <math>x - y = k</math>, <math>ax + by = k</math>, and <math>xy = k</math>, and their associated inequalities</li> <li>● Part of pedagogical support</li> </ul>

Topic	Courses	Same/Modified	Removed	Added
		<ul style="list-style-type: none"> <li>• Connections between initial value and y-intercept</li> <li>• Part of pedagogical support <ul style="list-style-type: none"> <li>○ First differences part of pedagogical support</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>○ Connecting the degree of the equation to the type of relation</li> </ul>
Representations of linear relations	MPM1D (EN)	<ul style="list-style-type: none"> <li>• Table of values</li> <li>• Graphing with and without technology</li> <li>• Equations</li> <li>• Determining one representation given another</li> </ul>		<ul style="list-style-type: none"> <li>• Concrete materials and visual representations</li> <li>• Make connections among the representations</li> </ul>
	MPM1D (FR)	<ul style="list-style-type: none"> <li>• Table of values</li> <li>• Graphing with and without technology</li> <li>• Equations</li> <li>• Determining one representation given another</li> <li>• Make connections among the representations</li> </ul>		<ul style="list-style-type: none"> <li>• Concrete materials and visual representations</li> </ul>
	MFM1P (EN)	<ul style="list-style-type: none"> <li>• Table of values</li> <li>• Graphing with and without technology</li> <li>• Equations</li> <li>• Determining one representation given another</li> </ul>		<ul style="list-style-type: none"> <li>• Concrete materials and visual representations</li> <li>• Make connections among the representations</li> </ul>
	MFM1P (FR)	<ul style="list-style-type: none"> <li>• Table of values</li> <li>• Graphing with and without technology</li> <li>• Equations</li> <li>• Determining one representation given another</li> <li>• Make connections among the representations</li> </ul>		<ul style="list-style-type: none"> <li>• Concrete materials and visual representations</li> </ul>
Equation of a Line/Linear Relation	MPM1D (EN)	<ul style="list-style-type: none"> <li>• Using rates of change and initial values to create an equation</li> <li>• Use the equation to solve problems</li> </ul>	<ul style="list-style-type: none"> <li>• Equations of the form <math>ax + by + c = 0</math></li> <li>• Express the equation of a line in the form <math>y = mx + b</math>, given the form <math>Ax + By + C = 0</math></li> </ul>	

Topic	Courses	Same/Modified	Removed	Added
		<ul style="list-style-type: none"> <li>Determining the equation from different representations of a linear relation and realistic situation</li> </ul>		
	MPM1D (FR)	<ul style="list-style-type: none"> <li>Using rates of change and initial values to create an equation</li> <li>Use the equation to solve problems</li> <li>Determining the equation from different representations of a linear relation and realistic situation</li> </ul>	<ul style="list-style-type: none"> <li>Equations of the form <math>Ax + By + C = 0</math></li> <li>Express the equation of a line in the form <math>y = mx + b</math>, given the form <math>Ax + By + C = 0</math></li> </ul>	
	MFM1P (EN)	<ul style="list-style-type: none"> <li>Using rates of change and initial values to create an equation</li> </ul>		
	MFM1P (FR)	<ul style="list-style-type: none"> <li>Using rates of change and initial values to create an equation</li> <li>Use the equation to solve problems</li> <li>Determining the equation from different representations of a linear relation and realistic situation</li> </ul>		
Transformation of a Line	MPM1D (EN) MPM1D (FR) MFM1P (EN) MFM1P (FR)	<ul style="list-style-type: none"> <li>Describe the effect on a linear graph when conditions change and make corresponding changes to the equations</li> </ul>		<ul style="list-style-type: none"> <li>Translate, reflect, and rotate <math>y = ax</math></li> </ul>
	MPM1D (EN)	<ul style="list-style-type: none"> <li>Graphically</li> </ul>		

Topic	Courses	Same/Modified	Removed	Added
Comparing two linear relations	MPM1D (FR)			<ul style="list-style-type: none"> <li>Algebraically using the method of comparison</li> </ul>
	MFM1P (EN)			
	MFM1P (FR)			
<b>Data</b>				
Describing potential implications and consequences of large data collection, storage, representation, and use	MPM1D (EN)			<ul style="list-style-type: none"> <li>Now a specific expectation</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Representation and analysis of data involving a single variable	MPM1D (EN)			<ul style="list-style-type: none"> <li>Introduction of quartile values and box plots</li> <li>Application of various representations learned in elementary</li> <li>Application of measures of central tendency and range learned in elementary</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			
Representation and analysis of data involving two variables	MPM1D (EN)	<ul style="list-style-type: none"> <li>Scatter plots and linear models</li> </ul>	<ul style="list-style-type: none"> <li>Curves of best fit</li> </ul>	<ul style="list-style-type: none"> <li>Determining the correlation</li> <li>Testing progression models</li> </ul>
	MPM1D (FR)		<ul style="list-style-type: none"> <li>Curves of best fit</li> </ul>	
	MFM1P (EN)			
	MFM1P (FR)		<ul style="list-style-type: none"> <li>Curves of best fit</li> </ul>	

Topic	Courses	Same/Modified	Removed	Added
Mathematical modelling	MPM1D (EN) MPM1D (FR) MFM1P (EN) MFM1P (FR)	<ul style="list-style-type: none"> <li>Question of interest, and collection of data is now in the context of using the process of mathematical modelling</li> </ul>		<ul style="list-style-type: none"> <li>Describing the use of mathematical modelling to inform decisions</li> <li>Using the process of mathematical modelling to solve a real-life problem</li> </ul>
<b>Measurement and Geometry</b>				
Understanding the development and use of a geometric concept or a measurement system by various cultures or communities and make connections to careers	MPM1D (EN) MPM1D (FR) MFM1P (EN) MFM1P (FR)			<ul style="list-style-type: none"> <li>Now a specific expectation</li> </ul>
Geometric properties	MPM1D (EN)	<ul style="list-style-type: none"> <li>From posing questions about geometric relationships to analyzing and creating designs using geometric relationships</li> </ul>	<ul style="list-style-type: none"> <li>Interior and exterior angles</li> <li>Developing the understanding of the Pythagorean relationship</li> <li>Confirm or deny statements about geometric properties</li> <li>Describing properties of polygons</li> </ul>	<ul style="list-style-type: none"> <li>Circle properties</li> </ul>

Topic	Courses	Same/Modified	Removed	Added
	MPM1D (FR)	<ul style="list-style-type: none"> <li>From posing questions about geometric relationships to analyzing and creating designs using geometric relationships</li> </ul>	<ul style="list-style-type: none"> <li>Interior and exterior angles</li> <li>Developing the understanding of the Pythagorean relationship</li> <li>Confirm or deny statements about geometric properties</li> <li>Describing properties of polygons</li> </ul>	<ul style="list-style-type: none"> <li>Circle properties</li> </ul>
	MFM1P (EN)	<ul style="list-style-type: none"> <li>From creating a sketch to creating a design using geometric properties and analyzing geometric properties in designs</li> </ul>	<ul style="list-style-type: none"> <li>Interior and exterior angles</li> <li>Properties of parallel and perpendicular lines</li> </ul>	<ul style="list-style-type: none"> <li>Circle properties</li> </ul>
	MFM1P (FR)	<ul style="list-style-type: none"> <li>From posing questions about geometric relationships to analyzing and creating designs using geometric relationships</li> </ul>	<ul style="list-style-type: none"> <li>Interior and exterior angles</li> <li>Developing the understanding of the Pythagorean relationship</li> <li>Confirm or deny statements about geometric properties</li> <li>Describing properties of polygons</li> </ul>	<ul style="list-style-type: none"> <li>Circle properties</li> </ul>
Measurement problems	MPM1D (EN)	<ul style="list-style-type: none"> <li>Applications of Pythagorean Theorem including problems involving measurement such as perimeter and area with composite shapes</li> <li>Understanding the relationship of the volume between the pyramid and prism, and the cone and cylinder and solve related problems</li> </ul>	<ul style="list-style-type: none"> <li>Max and min problems</li> <li>Volume and Surface Area of Sphere</li> </ul>	<ul style="list-style-type: none"> <li>Changing dimensions and impact on perimeter/circumference, area, surface area, and volume</li> <li>Solving measurement problems involving different measurement units</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)		<ul style="list-style-type: none"> <li>Max and min problems</li> <li>Volume of sphere</li> </ul>	
	MFM1P (FR)			

Topic	Courses	Same/Modified	Removed	Added
<b>Financial Literacy</b>				
Identify a past or current financial situation and explain how it can inform financial decisions, by applying an understanding of the context of the situation and related mathematical knowledge	MPM1D (EN) MPM1D (FR) MFM1P (EN) MFM1P (FR)			<ul style="list-style-type: none"> <li>• Now a specific expectation</li> </ul>
Financial situations involving appreciation and depreciation	MPM1D (EN) MPM1D (FR) MFM1P (EN) MFM1P (FR)			<ul style="list-style-type: none"> <li>• Now a specific expectation</li> </ul>
Purchasing decisions based on factors including interest rate, amount of down payment, duration of loan	MPM1D (EN) MPM1D (FR) MFM1P (EN)			<ul style="list-style-type: none"> <li>• Now a specific expectation</li> </ul>



Topic	Courses	Same/Modified	Removed	Added
	MFM1P (FR)			
Modifying budgets based on a change in circumstances	MPM1D (EN)			<ul style="list-style-type: none"> <li>• Now a specific expectation</li> </ul>
	MPM1D (FR)			
	MFM1P (EN)			
	MFM1P (FR)			