September 2 Correlation of *Math Makes Sense 7* to the new Ontario Curriculum

Ontario Grade 7 Curriculum	*Math Makes Sense 7* Student Text	Comments
B. Number		
B1. Number Sense		
Rational Numbers		
B1.1 represent and compare whole numbers up to and including one billion, including in expanded form using powers of ten, and describe various ways they are used in everyday life	Unit 1, Lesson 1.1, pages 10-13	One billion is not addressed. See *Math Makes Sense 6* Student Text, Unit 2, Lesson 2 for numbers including one billion in expanded form. See *Math Makes Sense 8* Student Text, Unit 1, Lesson 1.1 for ways that large numbers are used in everyday life.
B1.2 identify and represent perfect squares, and determine their square roots, in various contexts	Unit 1, Lesson 1.3, pages 19-21	
B1.3 read, represent, compare, and order rational numbers, including positive and negative fractions and decimal numbers to thousandths, in various contexts	Unit 4, Skills You'll Need, page 119 Unit 9, Lesson 9.2, pages 330-333	Rational numbers are not addressed. Comparing and ordering fractions is not addressed. See *Math Makes Sense 8* Student Text, Unit 4, Lesson 4.1 for comparing and ordering fractions.
Fractions, Decimals, and Percents		
B1.4 use equivalent fractions to simplify fractions, when appropriate, in various contexts		Using equivalent fractions to simplify fractions is not addressed. See *Math Makes Sense 6* Student Text, Unit 8, Lesson 1 for equivalent fractions.
B1.5 generate fraction and decimal numbers between any two quantities		Generating fractions between two quantities is not addressed. See *Math Makes Sense 8* Student Text, Unit 4, Lesson 4.1 for finding fractions between two numbers. Generating decimals between two quantities is not addressed.

		See *Math Makes Sense 6* Student Text, Unit 4, Lesson 3 for finding decimals between two numbers.
B1.6 round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts		Rounding decimals is not addressed. See *Math Makes Sense 6* Student Text, Unit 4, Lesson 4 for rounding decimals.
B1.7 convert between fractions, decimal numbers, and percents in various contexts	Unit 8, Lesson 8.1, pages 292-295	
B2. Operations		
Properties and Relationships		
B2.1 use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations	Unit 1, Lesson 1.1, pages 10-13 Unit 2, Lesson 2.3, pages 53-56; Lesson 2.4, pages 58-61; Lesson 2.5, pages 62-65; Unit Problem, pages 72, 73 Unit 3, Cross Strand Investigation, pages 112, 113 Unit 4, Lessons 4.1 - 4.9, pages 120-122, 124-138, 141-143, 145-149, 154, 155 Unit 8, Lesson 8.2, pages 297-301; Lesson 8.3, pages 302-304; Lesson 8.5, pages 311-313; Unit Problem, pages 320, 321	
Math Facts		
B2.2 understand and recall commonly used percents, fractions, and decimal equivalents	Unit 8, Skills You'll Need, pages 290, 291 Lesson 8.1, pages 292-295	

Mental Math		
B2.3 use mental math strategies to increase and decrease a whole number by 1%, 5%, 10%, 25%, 50%, and 100%, and explain the strategies used	Unit 8, Lesson 8.3, pages 302-304	Determining percent increase and decrease is not addressed. See *Math Makes Sense 8* Student Text, Unit 2, Lesson 2.5 for percent increase and decrease.
Addition and Subtraction		
B2.4 use objects, diagrams, and equations to represent, describe, and solve situations involving addition and subtraction of integers	Unit 9, Lesson 9.4, pages 337-340; Lesson 9.5, pages 341-344; Lesson 9.6, pages 346-350; Lesson 9.7, pages 351-355	
B2.5 add and subtract fractions, including by creating equivalent fractions, in various contexts	Unit 4, Skills You'll Need, page 116; Lesson 4.1 - 4.5, pages 120-122; 124-138	
Multiplication and Division		
B2.6 determine the greatest common factor for a variety of whole numbers up to 144 and the lowest common multiple for two or three whole numbers	Unit 1, Lesson 1.2, pages 14-17	
B2.7 evaluate and express repeated multiplication of whole numbers using exponential notation, in various contexts	Unit 1, Lesson 1.4, pages 23-26	
B2.8 multiply and divide fractions by fractions, using tools in various contexts		Multiplying and dividing fractions are not addressed. See *Math Makes Sense 8* Student Text, Unit 4, Lessons 4.4, 4.5, and 4.7 for multiplying and dividing fractions.
B2.9 multiply and divide decimal numbers by decimal numbers, in various contexts	Unit 4, Lesson 4.7, pages 145-148; Lesson 4.8, pages 149-152	
B2.10 identify proportional and non-proportional situations and apply proportional reasoning to solve problems		Proportional and non-proportional situations are not addressed. See *Math Makes Sense 8* Student Text, Unit 2, Lesson 2.1 for proportional situations.

C. Algebra		
C1. Patterns and Relationships		
Patterns		
C1.1 identify and compare a variety of repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and compare linear growing patterns on the basis of their constant rates and initial values	Unit 1, Lesson 1, pages 28-31; Unit Problem, pages 38, 39 Unit 10, Lesson 10.1, pages 368-372; Lesson 10.2, pages 373-377	Repeating and shrinking patterns are not addressed. Comparing patterns is not addressed.
C1.2 create and translate repeating, growing, and shrinking patterns involving whole numbers and decimal numbers using various representations, including algebraic expressions and equations for linear growing patterns	Unit 1, Lesson 1, pages 28-31; Unit Problem, pages 38, 39 Unit 10, Lesson 10.1, pages 368-272; Lesson 10.2, pages 373-377; Unit Problem, pages 402, 403	Repeating and shrinking patterns are not addressed. Algebraic expressions and equations for linear growing patterns are not addressed. See *Math Makes Sense 8* Student Text, Unit 10, Lesson 10.2 and 10.3 for writing algebraic expressions for patterns.
C1.3 determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns, involving whole numbers and decimal numbers, and use algebraic representations of the pattern rules to solve for unknown values in linear growing patterns	Unit 1, Lesson 1, pages 28-31; Unit Problem, pages 38, 39 Unit 10, Lesson 10.1, pages 368-272; Lesson 10.2, pages 373-377	Repeating and shrinking patterns are not addressed. Identifying missing elements is not addressed. Using algebraic representations of pattern rules to determine unknown values in linear growing patterns is not addressed. See *Math Makes Sense 8* Student Text, Unit 10, Lessons 10.2 and 10.3 for using algebraic representations of pattern rules to determine unknown values in linear growing patterns.
C1.4 create and describe patterns to illustrate relationships among integers	Unit 9, Lesson 9.2, pages 330-333; Lesson 9.3, pages 334-336	

C2. Equations and Inequalities		
Variables and Expressions		
C2.1 add and subtract monomials with a degree of 1 that involve whole numbers, using tools		Adding and subtracting monomials is not addressed. See *Addison-Wesley Applied Mathematics 9*, Student Text, Chapter 3, Lesson 3.2 for combining like terms.
C2.2 evaluate algebraic expressions that involve whole numbers and decimal numbers	Unit 3, Lesson 3.4, pages 94-96 Unit 10, Lesson 10.4, pages 383-386	Algebraic expressions that involve decimals are not addressed.
Equalities and Inequalities		
C2.3 solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions	Unit 10, Lesson 10.6, pages 390-394	Equations that involve decimals are not addressed.
C2.4 solve inequalities that involve multiple terms and whole numbers, and verify and graph the solutions		Inequalities are not addressed.
C3. Coding		
Coding Skills		
C3.1 solve problems and create computational representations of mathematical situations by writing and executing efficient code, including code that involves events influenced by a defined count and/or sub-program and other control structures		Coding is not addressed.
C3.2 read and alter existing code, including code that involves events influenced by a defined count and/or sub-program and other control structures, and describe how changes to the code affect the outcomes and the efficiency of the code		Coding is not addressed.

D. Data		
D1. Data Literacy		
Data Collection and Organization		
D1.1 explain why percentages are used to represent the distribution of a variable for a population or sample in large sets of data, and provide examples	Unit 8, Lesson 8.4, pages 306-310	See *Math Makes Sense 8* Student Text, Unit 5, Lesson 5.1 for the use of samples to collect data.
D1.2 collect qualitative data and discrete and continuous quantitative data to answer questions of interest and organize the sets of data as appropriate, including using percentages	Unit 5, Lesson 5.1, pages 169-171; Unit Problem, pages 212, 213	Qualitative data is not addressed. The collection of continuous data is not addressed. See *Math Makes Sense 8* Student Text, Unit 5, Lesson 5.5 for examples of continuous data.
Data Visualization		
D1.3 select from among a variety of graphs, including circle graphs, the type of graph best suited to represent various sets of data; display the data in the graphs with proper sources, titles, and labels, and appropriate scales; and justify their choice of graphs	Unit 5, Lesson 5.2, pages 174-178; Lesson 5.3, pages 179-182; Lesson 5.4, pages 188-192; Technology, pages 194, 195 Unit 8, Lesson 8.4, pages 306-310	Selecting a graph is not addressed. See *Math Makes Sense 8* Student Text, Unit 5, Lesson 5.5 for selecting an appropriate graph.
D1.4 create an infographic about a data set, representing the data in appropriate ways, including in tables and circle graphs, and incorporating any other relevant information that helps to tell a story about the data		Creating infographics is not addressed.
Data Analysis		
D1.5 determine the impact of adding or removing data from a data set on a measure of central tendency, and describe how these changes alter the shape and distribution of the data	Unit 5, Skills You'll Need, page 168; Lesson 5.5, pages 198-201	The impact of adding or removing data from a data set is not addressed. See *Math Makes Sense 8* Student Text, Unit 5, Lesson 5.4 for the effect of changing data on the measures of central tendency.

D1.6 analyse different sets of data presented in various ways, including in circle graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions	Unit 5, Lesson 5.2, pages 174-178; Lesson 5.3, pages 179-182; Lesson 5.4, pages 188-192; Lesson 5.6, pages 202-205	
D2. Probability		
Probability		
D2.1 describe the difference between independent and dependent events, and explain how their probabilities differ, providing examples		Independent and dependent events are not addressed.
D2.2 determine and compare the theoretical and experimental probabilities of two independent events happening and of two dependent events happening		The probability of two independent or dependent events is not addressed.
E. Spatial Sense		
E1. Geometric and Spatial Reasoning		
Geometric Reasoning		
E1.1 describe and classify cylinders, pyramids, and prisms, according to their geometric properties, including plane and rotational symmetry	Unit 3, Skills You'll Need, page 76	The classification and description of a cylinder is not addressed. Plane and rotational symmetry are not addressed.
E1.2 draw top, front, and side views, as well as perspective views, of objects and physical spaces, using appropriate scales	Unit 3, Skills You'll Need, page 77; Lesson 3.1, pages 78-81; Technology, pages 82, 83; Lesson 3.2, pages 84-87	
Location and Movement		
E1.3 perform dilations and describe the similarity between the image and the original shape	Unit 3, Cross Strand Investigation, pages 112, 113	Dilations are not addressed.

E1.4 describe and perform translations, reflections, and rotations on a Cartesian plane, and predict the results of these transformations	Unit 7, Lesson 7.3, pages 261-265	
E2. Measurement		
The Metric System		
E2.1 describe the differences and similarities between volume and capacity, and apply the relationship between millilitres (mL) and cubic centimetres (cm^3) to solve problems		Volume and capacity are not addressed. See *Math Makes Sense 6* Student Text, Unit 6, Lesson 8 for the relationship between millilitres and cubic centimetres.
E2.2 solve problems involving perimeter, area, and volume that require converting from one metric unit of measurement to another	Unit 6, Lesson 6.1, pages 217-220; Lesson 6.2, pages 221-224; Lesson 6.3, pages 226-230; Lesson 6.4, pages 234-237; Unit Problem, pages 242, 243	Problems that involve the conversion of metric units are not addressed. This was previously Grade 5 content.
Circles		
E2.3 use the relationship between the radius, diameter, and circumference of a circle to explain the formula for finding the circumference and to solve related problems		The relationships between the radius, diameter, and circumference of a circle are not addressed. See *Math Makes Sense 8* Student Text, Unit 6, Lesson 6.1 for relating the diameter and the radius. See *Math Makes Sense 8* Student Text, Unit 6, Lesson 6.2 for relating the diameter and circumference, and radius and circumference.
E2.4 construct circles when given the radius, diameter, or circumference		Constructing circles is not addressed. See *Math Makes Sense 8* Student Text, Unit 6, Lesson 6.1 for constructing circles given the diameter or the radius. See *Math Makes Sense 8* Student Text, Unit 6, Lesson 6.2 for understanding that it is not possible to construct a circle given its circumference.

E2.5 show the relationships between the radius, diameter, and area of a circle, and use these relationships to explain the formula for measuring the area of a circle and to solve related problems		The area of a circle is not addressed. See *Math Makes Sense 8* Student Text, Unit 6, Lesson 6.3 for the relationships between diameter, radius, and area.
Volume and Surface Area		
E2.6 represent cylinders as nets and determine their surface area by adding the areas of their parts		Representing a cylinder as a net is not addressed. See *Math Makes Sense 8* Student Text, Unit 6, Lesson 6.5 for a net of a cylinder and determining the surface area.
E2.7 show that the volume of a prism or cylinder can be determines by multiplying the area of its base by its height, and apply this relationship to find the area of the base, volume, and height of prisms and cylinders when given two of the three measurements	Unit 3, Lesson 3.6, pages 101-103	The volume of a triangular prism is not addressed. See *Math Makes Sense 8* Student Text, Unit 3, Lesson 3.4 for the volume of a triangular prism. The volume of a cylinder is not addressed. See *Math Makes Sense 8* Student Text, Unit 6, Lesson 6.4 for the volume of a cylinder.
F. Financial Literacy		
F1. Money and Finances		
Money Concepts		
F1.1 identify and compare exchange rates, and convert foreign currencies to Canadian dollars and vice versa		Financial literacy is not addressed.
Financial Management		
F1.2 identify and describe various reliable sources of information that can help with planning for and reaching a financial goal		Financial literacy is not addressed.
F1.3 create, track, and adjust sample budgets designed to meet longer-term financial goals for various scenarios		Financial literacy is not addressed.

F1.4 identify various societal and personal factors that may influence financial decision making, and describe the effects that each might have		Financial literacy is not addressed.
Consumer and Civic Awareness		
F1.5 explain how interest rates can impact savings, investments, and the cost of borrowing to pay for goods and services over time		Financial literacy is not addressed.
F1.6 compare interest rates and fees for different accounts and loans offered by various financial institutions, and determine the best option for different scenarios		Financial literacy is not addressed.