

Ontario Grade 5 Curriculum	<i>Math Makes Sense 5</i> Student Text	Comments
B. Number		
B1. Number Sense		
Whole Numbers		
B1.1 read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life	Unit 2, Lesson 1, pages 28-30	
B1.2 compare and order whole numbers up to and including 100 000, in various contexts	Unit 2, Lesson 1, pages 28-30	
Fractions, Decimals, and Percents		
B1.3 represent equivalent fractions from halves to twelfths, including improper fractions and mixed numbers, using appropriate tools, in various contexts	Unit 8, Lesson 1, pages 258-261; Lesson 2, pages 262-264	
B1.4 compare and order fractions from halves to twelfths, including improper fractions and mixed numbers, in various contexts	Unit 8, Lesson 3, pages 265-268	Comparing and ordering improper fractions and mixed numbers are not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 8, Lesson 3 for comparing and ordering mixed numbers and fractions.
B1.5 read, represent, compare, and order decimal numbers up to hundredths, in various contexts	Unit 4, Lesson 1, pages 114-117; Lesson 2, pages 118, 119; Lesson 3, pages 120-123 Unit 8, Lesson 4, pages 270-273; Lesson 5, pages 274-276	
B1.6 round decimal numbers to the nearest tenth, in various contexts		Rounding decimals to the nearest tenth is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 4, Lesson 4 for rounding decimals to the nearest tenth.

B1.7 describe relationships and show equivalences among fractions, decimal numbers up to hundredths, and whole number percents, using appropriate tools and drawing, in various contexts	Unit 8, Lesson 4, pages 270-274	Percents are not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 8, Lessons 6 and 7 for relating fractions, decimals, and percents.
B2. Operations		
Properties and Relationships		
B2.1 use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations	Unit 2, Lesson 13, pages 68-70 See B2.4 and B2.6	
Math Facts		
B2.2 recall and demonstrate multiplication facts from 0×0 to 12×12 , and related division facts	Unit 2, Lesson 7, pages 47-49	
Mental Math		
B2.3 use mental math strategies to multiply whole numbers by 0.1 and 0.01, and estimate sums and differences of decimal numbers up to hundredths, and explain the strategies used	Unit 4, Lesson 5, pages 127-129	Multiplying whole numbers by 0.1 and 0.01 is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 4, Lesson 9 for multiplying whole numbers by 0.1 and 0.01.
Addition and Subtraction		
B2.4 represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms	Unit 2, Lesson 2, pages 31-33; Lesson 3, pages 34-36; Lesson 4, pages 37-40; Lesson 5, pages 41-43; Lesson 6, pages 44-46 Unit 4, Lesson 5, pages 127-129; Lesson 6, pages 130-132; Lesson 7, pages 135-138	
B2.5 add and subtract fractions with like denominators, in various contexts		Adding and subtracting fractions with like denominators is not addressed.

Multiplication and Division		
B2.6 represent and solve problems involving the multiplication of two-digit whole numbers by two-digit whole numbers using the area model and using algorithms, and make connections between the two methods	Unit 2, Lesson 8, pages 52-54; Lesson 9, pages 55-57; Lesson 10, pages 58-60	
B2.7 represent and solve problems involving the division of three-digit whole numbers by two-digit whole numbers, using the area model and using algorithms, and make connections between the two methods, while expressing any remainder appropriately		Dividing 3-digit numbers by 2-digit numbers is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 2, Lessons 11 and 12 for strategies for dividing by 2-digit numbers.
B2.8 multiply and divide one-digit whole numbers by unit fractions, using appropriate tools and drawings		Multiplying and dividing 1-digit whole numbers by unit fractions is not addressed. See <i>Math Makes Sense 7</i> Student Text, Unit 4, Lesson 4.6 for multiplying a 1-digit whole number by a proper fraction.
B2.9 represent and create equivalent ratios and rates, using a variety of tools and models, in various contexts		Ratios and rates are not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 8, Lessons 9, 10, and 11 for equivalent ratios and rates.
C. Algebra		
C1. Patterns and Relationships		
Patterns		
C1.1 identify and describe repeating, growing, and shrinking patterns, including patterns found in real-life contexts	Unit 1, Lesson 1, pages 6-8; Lesson 4, pages 16-19	Repeating patterns are not addressed.
C1.2 create and translate growing and shrinking patterns using various representations, including tables of values and graphs	Unit 1, Lesson 2, pages 9-11; Lesson 3, pages 12-15; Lesson 4, pages 16-19 Unit 10, Lesson 3, pages 358-361; Lesson 4, pages 362-364; Lesson 5, pages 366, 367	

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	Unit 1, Lesson 1, pages 6-8; Lesson 4, pages 16-19; Lesson 5, pages 20, 21 Unit 10, Lesson 3, pages 358-361	Identifying missing elements in repeating patterns is not addressed.
C1.4 create and describe patterns to illustrate relationships among whole numbers and decimal tenths and hundredths	Unit 1, Lesson 1, pages 6-8; Lesson 2, pages 9-11; Lesson 3, pages 12-15; Lesson 4, pages 16-19 Unit 2, Lesson 8, pages 52-54 Unit 10, Lesson 2, pages 354-357	
C2. Equations and Inequalities		
Variables and Expressions		
C2.1 translate among words, algebraic expressions, and visual representations that describe equivalent relationships		Variables and expressions are not addressed.
C2.2 evaluate algebraic expressions that involve whole numbers		Evaluating algebraic expressions is not addressed.
Equalities and Inequalities		
C2.3 solve equations that involve whole numbers up to 100 in various contexts, and verify solutions		Solving equations is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 1, Lesson 4 for solving equations.
C2.4 solve inequalities that involve one operation and whole numbers up to 50, and verify and graph the solutions		Solving inequalities is not addressed.
C3. Coding		
Coding Skills		
C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves conditional statements and other control structures		Coding is not addressed.

C3.2 read and alter existing code, including code that involves conditional statements and other control structures, and describe how changes to the code affect the outcomes		Coding is not addressed.
D. Data		
D1. Data Literacy		
Data Collection and Organization		
D1.1 explain the importance of various sampling techniques for collecting a sample of data that is representative of the population		The importance of sampling techniques is not addressed.
D1.2 collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables	Unit 5, Lesson 5, pages 178-180	
Data Visualization		
D1.3 select from among a variety of graphs, including stacked-bar 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 graph	Unit 5, Lesson 3, pages 166-168; Lesson 4, pages 172-175	Selecting the best graph is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 5, Lesson 4 for selecting the best graph. Stacked-bar graphs are not addressed.
D1.4 create an infographic about a data set, representing the data in appropriate ways, including in relative-frequency tables, and stacked-bar 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 mean and the median and identify the mode(s), if any, for various data sets involving whole numbers and decimal numbers, and explain what each of these measures indicates about the data	Unit 5, Lesson 2, pages 160-162	The median is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 5, Lesson 2 for determining the median.
D1.6 analyse different sets of data presented in various ways, including in stacked-bar 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 1, pages 156-159; Lesson 3, pages 166-168; Lesson 4, pages 172-175; Lesson 6, pages 182-185	Stacked-bar graphs are not addressed.
D2. Probability		
Probability		
D2.1 use fractions to express the probability of events happening, represent this probability on a probability line, and use it to make predictions and informed decisions	Unit 11, Lesson 3, pages 386-388; Lesson 4, pages 389-391	A probability line is not addressed.
D2.2 determine and compare the theoretical and experimental probabilities of an event happening		Theoretical and experimental probabilities are not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 11, Lessons 1 and 5 for theoretical and experimental probabilities.
E. Spatial Sense		
E1. Geometric and Spatial Reasoning		
Geometric Reasoning		
E1.1 identify geometric properties of triangles, and construct different types of triangles when given side or angle measurements	Unit 3, Lesson 1, pages 80-83; Lesson 4, pages 90-93	

E1.2 identify and construct congruent triangles, rectangles, and parallelograms	Unit 3, Lesson 5, pages 94-97	Constructing rectangles and parallelograms is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 3, Lesson 4, for constructing rectangles and parallelograms.
E1.3 draw top, front, and side views of objects, and match drawings with objects		Drawing views of objects is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 3, Lesson 6 for drawing top, front, and side views.
Location and Movement		
E1.4 plot and read coordinates in the first quadrant of a Cartesian plane using various scales, and describe the translations that move a point from one coordinate to another		Graphing on a Cartesian plane is not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 5, Lesson 5 for graphing on a coordinate grid. See <i>Math Makes Sense 6</i> Student Text, Unit 7, Lesson 1 for translating figures on a coordinate grid.
E1.5 describe and perform translations, reflections, and rotations up to 180° on a grid, and predict the results of these transformations	Unit 7, Lesson 2, pages 231-234	Rotations in degrees are not addressed.
E2. Measurement		
The Metric System		
E2.1 use appropriate metric units to estimate and measure length, area, mass, and capacity	Unit 6, Lesson 6, pages 208, 209; Lesson 9, pages 216-218 Unit 9, Lesson 1, pages 308-310; Lesson 2, pages 311-313; Lesson 5, pages 319-322; Lesson 8, pages 331-334; Lesson 10, pages 339-341	

<p>E2.2 solve problems that involve converting larger metric units into smaller ones, and describe the base ten relationship among metric units</p>	<p>Unit 6, Lesson 6, pages 208, 209; Lesson 9, pages 216-218; Lesson 10, pages 219-221</p> <p>Unit 9, Lesson 2, pages 311-313</p>	
<p>Angles</p>		
<p>E2.3 compare angles and determine their relative size by matching them and by measuring them using appropriate non-standard units</p>		<p>Measuring and comparing angles using non-standard units is not addressed. See <i>Math Makes Sense 4</i> Student Text, Unit 3, Lessons 2 and 3, for measuring and comparing angles using non-standard units.</p>
<p>E2.4 explain how protractors work, use them to measure and construct angles up to 180°, and use benchmark angles to estimate the size of other angles</p>	<p>Unit 3, Lesson 2, pages 84-87</p>	
<p>Area</p>		
<p>E2.5 use the area relationships among rectangles, parallelograms, and triangles to develop the formulas for the area of a parallelogram and the area of a triangle, and solve related problems</p>	<p>Unit 9, Lesson 8, pages 331-334</p>	<p>The formulas for the areas of parallelograms and triangles are not addressed. See <i>Math Makes Sense 6</i> Student Text, Unit 9, Lessons 4, 5, and 6 for the areas of parallelograms and triangles.</p>
<p>E2.6 show that two-dimensional shapes with the same area can have different perimeters, and solve related problems</p>		<p>The same area with different perimeters is not addressed. See <i>Math Makes Sense 4</i> Student Text, Unit 9, Lesson 13 for shapes that have the same area but different perimeters.</p>
<p>F. Financial Literacy</p>		
<p>F1. Money and Finances</p>		
<p>Money Concepts</p>		
<p>F1.1 describe several ways that money can be transferred among individuals, organizations, and businesses</p>		<p>Financial literacy is not addressed.</p>

F1.2 estimate and calculate the cost of transactions involving multiple items priced in dollar and cents, including sales tax, using various strategies		Financial literacy is not addressed.
Financial Management		
F1.3 design sample basic budgets to manage finances for various earning and spending scenarios		Financial literacy is not addressed.
F1.4 explain the concepts of credit and debt, and describe how financial decisions may be impacted by each		Financial literacy is not addressed.
Consumer and Civic Awareness		
F1.5 calculate unit rates for various goods and services, and identify which rates offer the best value		Financial literacy is not addressed.
F1.6 describe the types of taxes that are collected by the different levels of government in Canada, and explain how tax revenue is used to provide services in the community		Financial literacy is not addressed.