

## Correlation of *Math Makes Sense 8* to the new Ontario Curriculum

| Ontario Grade 8 Curriculum   | <i>Math Makes Sense 8</i> Student Text   | Comments  |
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| <b>B. Number</b>   |  |   |
| <b>B1. Number Sense</b>  |  |   |
| <b>Rational and Irrational Numbers</b>   |  |   |
| B1.1 represent and compare very large and very small numbers, including through the use of scientific notation, and describe various ways they are used in everyday life | Unit 1, Skills You'll Need, page 7;<br>Lesson 1.3, pages 19-23                                 | Very small numbers are not addressed.<br>See <i>Addison-Wesley Applied Mathematics 9</i> Student Text, Chapter 2, Lesson 2.5 for scientific notation for very small numbers (requiring negative exponents).   |
| B1.2 describe, compare, and order numbers in the real number system (rational and irrational numbers), separately and in combination, in various contexts                | Unit 4, Lesson 4.1, pages 135-138  | The real number system is not addressed.<br>Comparing and ordering decimals is not addressed.<br><br>Comparing and ordering integers is not addressed.<br>See <i>Math Makes Sense 7</i> Student Text, Unit 9, Lesson 9.2 for comparing and ordering integers. |
| B1.3 estimate and calculate square roots, in various contexts  | Unit 8, Lesson 8.1, pages 325-328;<br>Lesson 8.2, pages 329-332;<br>Technology, pages 334, 335 |   |
| <b>Fractions, Decimals, and Percents</b>   |  |   |
| B1.4 use fractions, decimal numbers, and percents, including percents of more than 100% or less than 1%, interchangeably and flexibly to solve a variety of problems     | Unit 2, Skills You'll Need, page 52<br><br>Unit 4, Lesson 4.8, pages 165-168                   |   |

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| <b>B2. Operations</b>   |  |  |
| <b>Properties and Relationships</b>   |  |  |
| B2.1 use the properties and order of operations, and the relationships between operations, to solve problems involving rational numbers, ratios, rates, and percents, including those requiring multiple steps or multiple operations | <p>Unit 1, Lesson 1.1, pages 9-13;<br/>Lesson 1.4, pages 25-28;<br/>Unit Problem, pages 46, 47</p> <p>Unit 2, Skills You'll Need, pages 50, 51;<br/>Lesson 2.1, pages 53-56;<br/>Lesson 2.3, pages 65-68;<br/>Lesson 2.4, pages 70-73;<br/>Lesson 2.5, pages 74-77;<br/>Lesson 2.6, pages 78-81;<br/>Lesson 2.7, pages 82-85;<br/>Unit Problem, pages 92, 93</p> <p>Unit 3 Cross Strand Investigation, pages 130, 131</p> <p>Unit 9, Lesson 9.6, pages 390-292;<br/>Unit Problem, pages 414, 415</p> | Solving problems involving rational numbers (negative fractions, and decimals) is not addressed.   |
| <b>Math Facts</b>   |  |  |
| B2.2 understand and recall commonly used square numbers and their square roots  | Unit 8, Lesson 8.1, pages 325-328  |  |
| <b>Mental Math</b>  |  |  |
| B2.3 use mental math strategies to multiply and divide whole numbers and decimal numbers up to thousandths by powers of ten, and explain the strategies used  | Unit 4, Lesson 4.9, pages 169-171  | <p>Multiplying and dividing whole numbers by powers of 10 is not addressed.</p> <p>See <i>Math Makes Sense 7</i> Student Text, Unit 1, Skills You'll Need for multiplying whole numbers by powers of 10.</p> <p>See <i>Math Makes Sense 6</i> Student Text, Unit 4, Lessons 7 and 8 for multiplying and dividing decimals by powers of 10.</p> |

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| <b>Addition and Subtraction</b>  |  |   |
| B2.4 add and subtract integers, using appropriate strategies, in various contexts  | Unit 9, Skills You'll Need, pages 365-367;<br>Lesson 9.1, pages 368-371;<br>Lesson 9.2, pages 372-376;<br>Lesson 9.3, pages 377-379                          |   |
| B2.5 add and subtract fractions, using appropriate strategies, in various contexts   | Unit 4, Lesson 4.2, pages 139-142;<br>Lesson 4.3, pages 143-147  |   |
| <b>Multiplication and Division</b>   |  |   |
| B2.6 multiply and divide fractions by fractions, as well as by whole numbers and mixed numbers, in various contexts  | Unit 4, Skills You'll Need, page 134;<br>Lesson 4.4, pages 148-150;<br>Lesson 4.5, pages 151-155;<br>Lesson 4.6, pages 157-160;<br>Lesson 4.7, pages 161-164 |   |
| B2.7 multiply and divide integers, using appropriate strategies, in various contexts   | Unit 9, Lesson 9.4, pages 380-384;<br>Lesson 9.5, pages 385-388  |   |
| B2.8 compare proportional situations and determine unknown values in proportional situations, and apply proportional reasoning to solve problems in various contexts   | Unit 2, Lesson 2.1, pages 53-56  |   |
| <b>C. Algebra</b>  |  |   |
| <b>C1. Patterns and Relationships</b>  |  |   |
| <b>Patterns</b>  |  |   |
| C1.1 identify and compare a variety of repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and compare linear growing and shrinking patterns on the basis of their constant rates and initial values | Unit 10, Lesson 10.2, pages 423-427;<br>Lesson 10.3, pages 428-433   | Repeating and shrinking patterns are not addressed.<br>Comparing patterns is not addressed.   |
| C1.2 create and translate repeating, growing, and shrinking patterns involving rational numbers using various representations, including algebraic expressions and equations for linear growing and shrinking patterns                       | Unit 10, Lesson 10.2, pages 423-427;<br>Lesson 10.3, pages 428-433   | Repeating patterns and shrinking patterns are not addressed.<br>The use of rational numbers (positive and negative decimals and negative fractions) is not addressed. |

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| C1.3 determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in growing and shrinking patterns, involving rational numbers, and use algebraic representations of the pattern rules to solve for unknown values in linear growing and shrinking patterns | Unit 10, Lesson 10.2, pages 423-427;<br>Lesson 10.3, pages 428-433   | Shrinking patterns are not addressed.<br>Identifying missing elements is not addressed.   |
| C1.4 create and describe patterns to illustrate relationships among rational numbers   |  | Creating and describing patterns to illustrate relationships among rational numbers is not addressed.   |
| <b>C2. Equations and Inequalities</b>  |  |   |
| <b>Variables and Expressions</b>   |  |   |
| C2.1 add and subtract monomials with a degree of 1, and add binomials with a degree of 1 that involve integers, using tools  |  | Adding and subtracting monomials is not addressed.<br>See <i>Addison-Wesley Applied Mathematics 9</i> , Student Text, Chapter 3, Lesson 3.2 for combining like terms. |
| C2.2 evaluate algebraic expressions that involve rational numbers  | Unit 10 Skills You'll Need, page 419;<br>Lesson 10.2, pages 423-427;<br>Lesson 10.3, pages 428-433   | Algebraic expressions that involve rational numbers (positive and negative decimals, and negative fractions) are not addressed.                                       |
| <b>Equalities and Inequalities</b>   |  |   |
| C2.3 solve equations that involve multiple terms, integers, and decimal numbers in various contexts, and verify solutions  | Unit 1, Skills You'll Need, page 8;<br>Lesson 1.5, pages 29-32;<br>Lesson 1.6, pages 34-39<br><br>Unit 10, Lesson 10.4, pages 435-439;<br>Lesson 10.5, pages 440-443 | Equations that involve decimals are not addressed.  |
| C2.4 solve inequalities that involve integers, and verify and graph the solutions  |  | Inequalities are not addressed.   |

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| <b>C3. Coding</b>  |   |   |
| <b>Coding Skills</b>   |   |   |
| C3.1 solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves the analysis of data in order to inform and communicate decisions  |   | Coding is not addressed.  |
| C3.2 read and alter existing code involving the analysis of data in order to inform and communicate decisions, and describe how changes to the code affect the outcomes and the efficiency of the code   |   | Coding is not addressed.  |
| <b>D. Data</b>   |   |   |
| <b>D1. Data Literacy</b>   |   |   |
| <b>Data Collection and Organization</b>  |   |   |
| D1.1 identify situations involving one-variable data and situations involving two-variable data, and explain when each type of data is needed  | Unit 5, Lesson 5.3, pages 200-204   | The use of the word <i>variable</i> is not addressed.<br>See <i>Addison-Wesley Applied Mathematics 9</i> Student Text, Chapter 7, Lesson 7.3 for examples of two-variable data.   |
| D1.2 collect continuous data to answer questions of interest involving two variables, and organize the data sets as appropriate in a table of values   |   | The collection of continuous data is not addressed.<br>See <i>Addison-Wesley Applied Mathematics 9</i> Student Text, Chapter 7, Lesson 7.3 for collecting continuous data.  |
| <b>Data Visualization</b>  |   |   |
| D1.3 select from among a variety of graphs, including scatter plots, 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, Skills You'll Need, page 184;<br>Lesson 5.3, pages 200-204<br>Technology, pages 205-210;<br>Lesson 5.5, pages 216-220;<br>Technology, pages 221-223;<br>Lesson 5.6, pages 224-227 | Scatter plots are not addressed.<br>See <i>Math Makes Sense 6</i> Student Text, Unit 5, Lesson 6 for scatter plots.<br>See <i>Addison-Wesley Applied Mathematics 9</i> Student Text, Chapter 7, Lesson 7.3 for scatter plots. |

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| D1.4 create an infographic about a data set, representing the data in appropriate ways, including in tables and scatter plots, and incorporating any other relevant information that helps to tell a story about the data  |   | Creating infographics is not addressed.   |
| <b>Data Analysis</b>   |   |   |
| D1.5 use mathematical language including the terms, “strong”, “weak”, “none”, “positive”, and “negative”, to describe the relationship between two variables for various data sets with and without outliers   |   | The mathematical language that describes the relationship between two variables for various data sets with and without outliers is not addressed. |
| D1.6 analyse different sets of data presented in various ways, including in scatter plots 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, Skills You’ll Need, pages 185, 186;<br>Lesson 5.2, pages 194-199;<br>Lesson 5.3, pages 200-204;<br>Technology, pages 205-210;<br>Lesson 5.5, pages 216-220;<br>Technology, pages 221-223;<br>Lesson 5.6, pages 224-227;<br>Unit Problem, pages 234, 235 |   |
| <b>D2. Probability</b>   |   |   |
| <b>Probability</b>   |   |   |
| D2.1 solve various problems that involve probability, using appropriate tools and strategies, including Venn and tree diagrams   | Unit 11, Skills You’ll Need, pages 454, 455;<br>Lesson 11.1, pages 456-460;<br>Lesson 11.2, pages 461-465;<br>Lesson 11.3, pages 467-470;<br>Lesson 11.4, pages 471-473   | The use of Venn diagrams is not addressed.  |
| D2.2 determine and compare the theoretical and experimental probabilities of multiple independent events happening and of multiple dependent events happening  |   | The probability of multiple independent or dependent events is not addressed.   |

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| <b>E. Spatial Sense</b>   |   |  |
| <b>E1. Geometric and Spatial Reasoning</b>  |   |  |
| <b>Geometric Reasoning</b>  |   |  |
| E1.1 identify geometric properties of tessellating shapes and identify the transformations that occur in the tessellations                                  |   | Tessellations are not addressed.<br>See <i>Math Makes Sense 7 Student Text</i> , Unit 7, Lessons 7.3-7.5, and Unit Problem for identifying transformations in tessellations. |
| E1.2 make objects and models using appropriate scales, given their top, front, and side views or their perspective views                                    | Unit 3, Lesson 3.1, pages 102-106;<br>Lesson 3.2, pages 106-110;<br>Unit Problem, pages 128, 129                            |  |
| E1.3 use scale drawings to calculate actual lengths and areas, and reproduce scale drawings at different ratios   | Unit 2, Lesson 2.2, pages 57-60   | Calculating areas is not addressed.  |
| <b>Location and Movement</b>  |   |  |
| E1.4 describe and perform translations, reflections, rotations, and dilations on a Cartesian plane, and predict the results of these transformations        | Unit 9, Lesson 9.8, pages 398-402;<br>Lesson 9.9, pages 403-407   |  |
| <b>E2. Measurement</b>  |   |  |
| <b>The Metric System</b>  |   |  |
| E2.1 represent very large (mega, giga, tera) and very small (micro, nano, pico) metric units using models, base ten relationships, and exponential notation |   | Very large and very small metric units are not addressed.  |
| <b>Lines, Angles, and Similarity</b>  |   |  |
| E2.2 solve problems involving angle properties, including the properties of intersecting and parallel lines and of polygons                                 | Unit 7, Lesson 7.1, pages 271-275;<br>Lesson 7.2, pages 278-282;<br>Lesson 7.3, pages 284-289;<br>Lesson 7.6, pages 303-307 |  |

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| <b>Length, Area, and Volume</b>  |  |  |
| E2.3 solve problems involving the perimeter, circumference, area, volume, and surface area of composite two-dimensional shapes and three-dimensional objects, using appropriate formulas | Unit 3, Lesson 3.3, pages 112-116;<br>Lesson 3.4, pages 117-121<br><br>Unit 6, Lesson 6.2, pages 242-246;<br>Lesson 6.3, pages 247-252;<br>Lesson 6.4, pages 253-256;<br>Lesson 6.5, pages 258-260 | Composite two-dimensional shapes are not addressed.<br>See <i>Math Makes Sense 7 Student Text</i> , Unit 6, Lesson 6.4 for the perimeters and areas of composite shapes.<br>See <i>Addison-Wesley Applied Mathematics 9 Student Text</i> , Chapter 8, Lesson 8.1 for the perimeters and areas of composite shapes.<br><br>Composite three-dimensional objects are not addressed. |
| E2.4 describe the Pythagorean relationship using various geometric models, and apply the theorem to solve problems involving an unknown side length for a given right triangle           | Unit 8, Lesson 8.3, pages 337-341;<br>Technology, pages 342, 343;<br>Lesson 8.4, pages 346-350;<br>Lesson 8.5, pages 351-354;<br>Unit Problem, pages 358, 359                                      |  |
| <b>F. Financial Literacy</b>   |  |  |
| <b>F1. Money and Finances</b>  |  |  |
| <b>Money Concepts</b>  |  |  |
| F1.1 describe some advantages and disadvantages of various methods of payment that can be used when dealing with multiple currencies and exchange rates                                  |  | Financial literacy is not addressed.   |
| <b>Financial Management</b>  |  |  |
| F1.2 create a financial plan to reach a long-term financial goal, accounting for income, expenses, and tax implications  |  | Financial literacy is not addressed.   |
| F1.3 identify different ways to maintain a balanced budget, and use appropriate tools to track all income and spending, for several different scenarios                                  |  | Financial literacy is not addressed.   |

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| F1.4 determine the growth of simple and compound interest at various rate using digital tools, and explain the impact interest has on long-term financial planning  | Unit 2, Lesson 2.7, pages 82-85 | Compound interest and the growth of simple and compound interest are not addressed. |
| <b>Consumer and Civic Awareness</b>   |                                 |   |
| F1.5 compare various ways for consumers to get more value for their money when spending, including taking advantage of sales and customer loyalty and incentive programs, and determine the best choice for different scenarios |                                 | Financial literacy is not addressed.  |
| F1.6 compare interest rates, annual fees, and rewards and other incentives offered by various credit card companies and consumer contracts to determine the best value and the best choice for different scenarios              |                                 | Financial literacy is not addressed.  |