**Correlation of the Prince Edward Island Mathematics Curriculum   
with Mathology Grade 7 (Number)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Outcomes** | **Grade 7 Mathology.ca** | **Mathology Practice Workbook 7** | **Pearson Canada Grades 4–9 Mathematics Learning Progression** |
| **General Curriculum Outcome**  Develop number sense. | | | |
| **Specific Curriculum Outcomes**  N1. Determine and explain why a number is divisible by 2, 3, 4, 5, 6, 8, 9 or 10, and why a number cannot be divided by 0. | **Number Unit 1: Number Relationships**  1: Developing Divisibility Rules for 2, 4, 5, 8, and 10  2: Developing Divisibility Rules for 3, 6, and 9  3. Relating Factors, Multiples, and Divisibility | Unit 2 Questions 1-19, 31 (pp. 11-16, 20) | **Big Idea: Quantities and numbers can be operated on to determine how many and how much.**  **Investigating number and arithmetic properties**  - Examines and classifies whole numbers based on their properties (e.g., even/odd; prime; composite; divisible by 2, 5, 10).   * Uses reasoning and knowledge of factors to examine divisibility of numbers (by 4, 8, 3, 6, and 9). |
| N2. Demonstrate an understanding of the addition, subtraction, multiplication and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected) to solve problems. | **Number Unit 4: Operations with Decimals and Percents**  17: Adding and Subtracting Decimals  18: Multiplying Decimals  19: Dividing Decimals  20: Applying the Order of Operations with Decimals  23: Calculating Sales Taxes and Tips  24: Calculating Sales Taxes and Discounts | Unit 3 Questions 1-13  (pp. 21-26)  Unit 12 Questions 15, 17, 18 (pp. 114-115) | **Big Idea:** **Quantities and numbers can be operated on to determine how many and how much.**  **Developing conceptual meaning of operations**   * Demonstrates an understanding of decimal number computation through modelling and flexible strategies.   **Developing fluency of operations**   * Solves decimal number computation using efficient strategies.   **Investigating number and arithmetic properties**   * Evaluates equations with brackets using order of operations. |

|  |  |  |  |
| --- | --- | --- | --- |
| N3. Solve problems involving percents from 1% to 100%. | **Number Unit 3: Fractions, Decimals, and Percents**  16: Relating Fractions, Decimals, and Percents  **Number Unit 4: Operations with Decimals and Percents**  21: Working with Percents  22: Using Mental Math to Calculate Percents  23: Calculating Sales Taxes and Tips  24: Calculating Sales Taxes and Discounts | Unit 8 Questions 16-22  (pp. 73-75)  Unit 11 Questions 7-16  (pp. 99-102)  Unit 12 Question 15  (pp. 114) | **Big Idea: Numbers are related in many ways.**  **Using ratios, rates, proportions, and percents creates a relationship between quantities**   * Understands and applies the concept of percentage as a rate per 100 (e.g., calculating sales tax, tips, or discounts).   **Big Idea: Numbers are related in many ways.**  **Decomposing and composing numbers to investigate equivalencies**   * Models and explains the relationships among fractions, decimals, and percents. * Translates flexibly between representations. |
| N4. Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially and symbolically. | **Number Unit 2: Fluency with Integers**  4: Representing Integers  5: Adding Integers with Models  6: Adding Integers  7: Subtracting Integers with Models  8: Subtracting Integers  9: Adding and Subtracting Integers  10: Solving Problems Involving Integers | Unit 12 Questions 1-7, 14-17, 21 (pp. 109-116) | **Big Idea: The set of real numbers is infinite.**  **Extending whole number understanding to the set of real numbers**   * Understands that a positive integer and its negative opposite are the same distance from zero (e.g., both 5 and –5 are five units from zero on a number line).   **Big Idea:** **Numbers are related in many ways.**  **Comparing and ordering quantities (multitude or magnitude)**   * Compares, orders, and locates integers.   **Big Idea:** **Quantities and numbers can be operated on to determine how many and how much.**  **Developing conceptual meaning of operations**   * Models and demonstrates an understanding of integer addition and subtraction.   **Big Idea:** **Quantities and numbers can be operated on to determine how many and how much.**  **Developing fluency of operations**   * Estimates and solves integer addition and subtraction using efficient strategies. |

|  |  |  |  |
| --- | --- | --- | --- |
| N5. Demonstrate an understanding of multiplication and division of integers, concretely, pictorially and symbolically. | **Number Unit 2: Fluency with Integers**  11: Multiplying Integers  12: Dividing Integers  13: Order of Operations with Integers | Unit 12 Questions 8-13, 20, 21 (pp. 112-113, 115-116) | **Big Idea: Quantities and numbers can be operated on to determine how many and how much.**  **Developing conceptual meaning of operations**   * Models and demonstrates an understanding of integer multiplication and division.   **Big Idea: Quantities and numbers can be operated on to determine how many and how much.**  **Investigating Number and Arithmetic Properties**   * Evaluates equations with brackets using order of operations. |
| N6. Compare and order positive fractions, positive decimals (to thousandths) and whole numbers by using:  • benchmarks  • place value  • equivalent fractions and/or decimals. | **Number Unit 3: Fractions, Decimals, and Percents**  14: Comparing and Ordering Fractions and Decimals (to hundredths)  15: Comparing and Ordering Fractions and Decimals (to thousandths) | Unit 7 Questions 7-10, 18  (pp. 62-63, 67) | **Big Idea: Numbers are related in many ways.**  **Comparing and ordering quantities (multitude or magnitude)**   * Compares, orders, and locates positive rational numbers using flexible strategies. |

**Correlation of the Prince Edward Island Mathematics Curriculum   
with Mathology Grade 7 (Patterns and Relations: Patterns)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Outcomes** | **Grade 7 Mathology.ca** | **Mathology Practice Workbook 7** | **Pearson Canada Grades 4–9 Mathematics Learning Progression** |
| **General Curriculum Outcome** Use patterns to describe the world and to solve problems. | | | |
| PR1. Create a table of values from a linear relation, graph the table of values, and analyse the graph to draw conclusions and solve problems. | **Patterns and Relations Unit 1: Linear Patterns and Equations** 1: Representing Patterns  2: Comparing Linear Patterns  3: Working with Linear Patterns 11: Writing and Solving Patterns Involving Linear Relations | Unit 1 Questions 1-6, 8, 15 (pp. 2-10)  Unit 13 Question 16  (p. 123) | **Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically**.  **Representing patterns, relations, and functions**   * Represents a mathematical context or problem with expressions and equations using variables to represent unknowns. * Generates ordered pairs for a linear relation and plots the coordinates on a graph. (Limited to integer values on four quadrants.) * Matches different representations of the same linear relation (e.g., graph, equation, table of values) * Differentiates between linear and non-linear relations by their graphical representation. * Models and solves problems with integers using linear equations in different forms (e.g., a*x* = *b*; *ax* + *b* = *c*; *a*(*x* + *b*) = *c*).   **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.  Using variables, algebraic expressions, and equations to represent mathematical relations**   * Evaluates algebraic expressions, including formulas, given speciﬁc values for the variables (e.g., evaluate 3*r* – 12, when *r* = 3; *h*, when base is 12 cm and height is 5 cm). * Writes expressions to describe patterns and contexts representing linear relations (e.g., 5, 8, 11, 14 can be represented as 3*n* + 2).   **Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.  Generalizing and analyzing patterns, relations, and functions**   * Predicts the value of a given element in a numeric or shape pattern using pattern rules. * Investigates, analyzes, and compares equations and graphs of linear relations to make generalizations and predictions |

A logo with a black background

AI-generated content may be incorrect.**Correlation of the Prince Edward Island Mathematics Curriculum   
with Mathology Grade 7 (Patterns and Relations: Variables and Equations)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Outcomes** | **Grade 7 Mathology.ca** | **Mathology Practice Workbook 7** | **Pearson Canada Grades 4–9 Mathematics Learning Progression** |
| **General Curriculum Outcome**  Represent algebraic expressions in multiple ways. | | | |
| **Specific Curriculum Outcomes**  PR2. Demonstrate an understanding of the preservation of equality by:  • modelling preservation of equality, concretely, pictorially and symbolically  • applying preservation of equality to solve equations. | **Patterns and Relations Unit 1: Linear Patterns and Equations** 4: Modelling and Solving  One-Step Equations  6: Solving One-Step Equations (with Relational Rods)  7: Solving Equations with Multiple Terms (with Relational Rods)  8: Modelling and Solving One-Step Linear Equations  9: Modelling and Solving Multi-Step Linear Equations  10: Writing and Solving Equations to Solve Problems  11: Writing and Solving Problems Involving Linear Relations | Unit 13 Questions 12-15  (pp. 120-122) | **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.**  **Understanding equality and inequality, building on generalized properties of numbers and operations.**   * Investigates and models the meaning of preservation of equality of single variable equations (e.g., 3*x* = 12). * Applies arithmetic properties (e.g., distributive, commutative, identities) to identify, transform, and generate equivalent numeric expressions (e.g., 3(2 + 5) = (2 + 5) + (2 + 5) + (2 + 5)). * Models the preservation of equality to solve equations involving integer coefﬁcients (e.g., –4*m* + 16 = –12).   **Using variables, algebraic expressions, and equations to represent mathematical relations**   * Evaluates algebraic expressions, including formulas, given speciﬁc values for the variables (e.g., evaluate 3*r* – 12, when *r* = 3; *h*, when base is 12 cm and height is 5 cm). * Writes expressions to describe patterns and contexts representing linear relations (e.g., 5, 8, 11, 14 can be represented as 3*n* + 2).   **Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.**  **Representing patterns, relations, and functions**   * Represents a mathematical context or problem with expressions and equations using variables to represent unknowns. * Models and solves problems with integers using linear equations in different forms  (e.g., a*x* = *b*; *ax* + *b* = *c*; *a*(*x* + *b*) = *c*). |
| PR3. Explain the difference between an expression and an equation. | **Patterns and Relations Unit 1: Linear Patterns and Equations** 5: Evaluating Expressions and Writing Equations | Unit 13 Question 11  (p. 120) | **Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.**  **Representing patterns, relations, and functions**   * Matches different representations of the same linear relation (e.g., graph, equation, table of values)   **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.  Using variables, algebraic expressions, and equations to represent mathematical relations**   * Evaluates algebraic expressions, including formulas, given speciﬁc values for the variables (e.g., evaluate 3*r* – 12, when *r* = 3; *h*, when base is 12 cm and height is 5 cm). * Writes expressions to describe patterns and contexts representing linear relations (e.g., 5, 8, 11, 14 can be represented as 3*n* + 2). |
| PR4. Evaluate an expression, given the value of the variable(s). | **Patterns and Relations Unit 1: Linear Patterns and Equations** 4: Writing and Evaluating Algebraic Expressions  5: Evaluating Expressions and Writing Equations | Unit 1 Questions 1-3, 9-15 (pp. 2-10)  Unit 13 Questions 1-4, 8, 10  (pp. 117-120) | **Big Idea**: **Regularity and repetition form patterns that can be generalized and predicted mathematically.**  **Representing patterns, relations, and functions**   * Represents a mathematical context or problem with expressions and equations using variables to represent unknowns. * Matches different representations of the same linear relation (e.g., graph, equation, table of values)   **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.  Using variables, algebraic expressions, and equations to represent mathematical relations**   * Evaluates algebraic expressions, including formulas, given speciﬁc values for the variables (e.g., evaluate 3*r* – 12, when *r* = 3; *h*, when base is 12 cm and height is 5 cm). * Writes expressions to describe patterns and contexts representing linear relations (e.g., 5, 8, 11, 14 can be represented as 3*n* + 2). |
| PR5. Model and solve problems that can be represented by one-step linear equations of the form *x* + *a* = *b*, concretely, pictorially and symbolically, where *a* and *b* are integers. | **Patterns and Relations Unit 1: Linear Patterns and Equations** 6: Solving One-Step Equations (with Relational Rods)  8: Modelling and Solving One-Step Linear Equations  10: Writing and Solving Equations to Solve Problems | Unit 13 Questions 12-14, 19  (pp. 120-124) | **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.**  **Understanding equality and inequality, building on generalized properties of numbers and operations.**   * Investigates and models the meaning of preservation of equality of single variable equations (e.g., 3*x* = 12). * Applies arithmetic properties (e.g., distributive, commutative, identities) to identify, transform, and generate equivalent numeric expressions (e.g., 3(2 + 5) = (2 + 5) + (2 + 5) + (2 + 5)). * Models the preservation of equality to solve equations involving integer coefﬁcients (e.g., –4*m* + 16 = –12).   **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.**  **Using variables, algebraic expressions, and equations to represent mathematical relations**   * Evaluates algebraic expressions, including formulas, given speciﬁc values for the variables (e.g., evaluate 3*r* – 12, when *r* = 3; *h*, when base is 12 cm and height is 5 cm). |
| PR6. Model and solve problems that can be represented by linear equations of the form:  • *ax* + *b* = *c*  • *ax* = *b*  • = *b,* a ≠ 0  concretely, pictorially and symbolically, where *a*, *b* and *c* are whole numbers. | **Patterns and Relations Unit 1: Linear Patterns and Equations** 7: Solving Equations with Multiple Terms (with Relational Rods)  9: Modelling and Solving Multi-Step Linear Equations  10: Writing and Solving Equations to Solve Problems  11: Writing and Solving Problems Involving Linear Relations | Unit 13 Questions 12-19, 23  (pp. 120-124, 127) | **Big Idea: Patterns and relations can be represented with symbols, equations, and expressions.**  **Understanding equality and inequality, building on generalized properties of numbers and operations.**   * Investigates and models the meaning of preservation of equality of single variable equations (e.g., 3*x* = 12). * Investigates the process of decomposing arithmetic equations and comparing them with the sequence of operations used to solve algebraic equations (e.g., 4 × 5 + 6 = 26 compared to solving 4*x* + 6 = 26). * Models the preservation of equality to solve equations involving integer coefﬁcients (e.g., –4*m* + 16 = –12).   **Using variables, algebraic expressions, and equations to represent mathematical relations**   * Identifies and describes the meaning of parts of an equation using mathematical terms (e.g., *sum*, *coefficient*, *factor*, *variable*, *constant*). * Evaluates algebraic expressions, including formulas, given speciﬁc values for the variables (e.g., evaluate 3*r =* 12, when *r* = 3; , when base is 12 cm and height is 5 cm). * Writes expressions to describe patterns and contexts representing linear relations (e.g., 5, 8, 11, 14 can be represented as 3*n* + 2).   **Big Idea: Regularity and repetition form patterns that can be generalized and predicted mathematically.**  **Representing patterns, relations, and functions**   * Represents a mathematical context or problem with expressions and equations using variables to represent unknowns. * Models and solves problems with integers using linear equations in different forms (e.g., a*x* = *b*; *ax* + *b* = *c*; *a*(*x* + *b*) = *c*). |

**Correlation of the Prince Edward Island Mathematics Curriculum   
with Mathology Grade 7 (Shape and Space: Measurement)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Outcomes** | **Grade 7 Mathology.ca** | **Mathology Practice Workbook 7** | **Pearson Canada Grades 4–9 Mathematics Learning Progression** | |
| **General Curriculum Outcome** Use direct and indirect measurement to solve problems. | | | |
| **Specific Curriculum Outcomes**  SS1. Demonstrate an understanding of circles by:  • describing the relationships among radius, diameter and circumference of circles;  • relating circumference to pi;  • determining the sum of the central angles;  • constructing circles with a given radius or diameter;  • solving problems involving the radii, diameters and circumferences of circles. | **Shape and Space Unit 1:**  **2-D Shapes**  1: Exploring Circles  2: Calculating Circumference  3: Exploring Central Angles | Unit 4 Questions 1-7, 9  (pp. 29-32) | **Big Idea: Many things in our world (e.g., objects, spaces, events) have attributes that can be measured and compared.**  **Understanding attributes that can be measured, compared, or ordered**   * Understands circumference as the measure around a circle.   **Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.**  **Selecting and using units to estimate, measure, construct, and make comparisons**   * Constructs circles based on radius and diameter measures. * Relates angle measures to arcs and sectors of a circle.   **Understanding relationships among measured units**   * Develops and generalizes strategies to compute the circumference and area of circles. |

|  |  |  |  |
| --- | --- | --- | --- |
| SS2. Develop and apply a formula for determining the area of:  • triangles;  • parallelograms;  • circles. | **Shape and Space Unit 1:**  **2-D Shapes and 3-D Solids**  4: Determining the Area of Triangles  5: Determining the Area of Parallelograms  6: Estimating and Determining the Area of a Circle | Unit 4 Questions 8-12, 14, 15, 18 (pp. 31-37) | **Big Idea:** **Assigning a unit to a continuous attribute allows us to measure and make comparisons.**  **Understanding relationships among measured units**   * Develops and generalizes strategies to compute the circumference and area of circles.   **Big Idea: 2-D shapes and 3-D solids can be analyzed and classified in different ways by their attributes.**  **Investigating 2-D shapes, 3-D solids, and their attributes through composition and decomposition**   * Constructs and decomposes polygons into shapes with known areas (e.g., triangles, rectangles).   **Big Idea: Assigning a unit to a continuous attribute allows us to measure and make comparisons.**  **Understanding relationships among measured units**   * Develops and generalizes strategies to compute area of triangles, quadrilaterals, and other polygons (e.g., decomposing a parallelogram and rearranging to form a rectangle). |

A logo with a black background

AI-generated content may be incorrect.**Correlation of the Prince Edward Island Mathematics Curriculum   
with Mathology Grade 7 (Shape and Space: Transformations)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Outcomes** | **Grade 7 Mathology.ca** | **Mathology Practice Workbook 7** | **Pearson Canada Grades 4–9 Mathematics Learning Progression** |
| **General Curriculum Outcome** Describe and analyze position and motion of objects and shapes. | | | |
| **Specific Curriculum Outcomes**  SS3. Identify and plot points in the four quadrants of a Cartesian plane, using integral ordered pairs. | **Shape and Space Unit 2: The Cartesian Plane**  7: Plotting and Reading Coordinates  8: Exploring the Cartesian Plane | Unit 6 Questions 1-4  (pp. 47-49) | **Big Idea: Objects can be located in space and viewed from multiple perspectives.**  **Locating and mapping objects in space**   * Plots and locates points on a Cartesian plane, and relates the location to the two axes. (Limited to the first quadrant.) * Identifies, locates, and plots points, polygon vertices, and lines on a Cartesian plane in all four quadrants. (Limited to integers.) |

A close up of a sign

Description automatically generated**Correlation of the Prince Edward Island Mathematics Curriculum   
with Mathology Grade 7 (Statistics and Probability: Data Analysis)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Outcomes** | **Grade 7 Mathology.ca** | | | **Mathology Practice Workbook 7** | **Pearson Canada Grades 4–9 Mathematics Learning Progression** |
| **General Curriculum Outcome** Collect, display and analyze data to solve problems. | | | | | |
| **Specific Curriculum Outcomes**  SP1. Demonstrate an understanding of central tendency and range by:  • determining the measures of central tendency (mean, median, mode) and range  • determining the most appropriate measures of central tendency to report findings. | **Statistics and Probability**  **Unit 1: Data Management**  1: Exploring Measures of Data  2: Determining Mean and Mode  3: Determining Median and Range  4: Comparing Measures of Central Tendency | | | Unit 10 Questions 7, 8, 10, 11, 13, 16 (pp. 89-95) | **Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphic displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.**  **Creating graphical displays of collected data**   * Creates charts and graphs with appropriate titles and labels to represent data collected. * Represents data graphically using many -to-one correspondence with appropriate scales and intervals.   **Reading and interpreting data displays and analyzing variability**   * Reads and interprets data displays using many-to-one correspondence. * Visualizes and determines the median value as a middle measure representing a whole data set. * Visualizes and determines the mean of a data set. * Understands and describes the differences between the central tendency values (i.e., mode, median, mean) and explores which measure is most appropriate for the data collected.   **Using the language and tools of chance to describe and predict events**   * Describes data using frequency counts (e.g., 5 people chose peppermint) and modal value (e.g., dogs are the most common pets). |
| SP2. Determine the effect on the mean, median and mode when an outlier is included in a data set. | | **Statistics and Probability**  **Unit 1: Data Management** 5: Exploring the Effect of Outliers on Mean, Median, and Mode | Unit 10 Questions 7, 9, 10, 12 (pp. 89-92) | | **Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphic displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.**  **Reading and interpreting data displays and analyzing variability**   * Explains the effect of removing or changing values (including outliers) on measures of central tendency. |

A close up of a sign

Description automatically generated**Correlation of the Prince Edward Island Mathematics Curriculum   
with Mathology Grade 7 (Statistics and Probability: Chance and Uncertainty)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Outcomes** | **Grade 7 Mathology.ca** | **Mathology Practice Workbook 7** | **Pearson Canada Grades 4–9 Mathematics Learning Progression** |
| **General Curriculum Outcome** Use experimental or theoretical probabilities to represent and solve problems involving uncertainty. | | | |
| **Specific Curriculum Outcomes**  SP3. Express probabilities as ratios, fractions and percents. | **Statistics and Probability**  **Unit 2: Probability**  6: Exploring Theoretical Probability  7: Writing Experimental Probabilities  9: Exploring Theoretical and Experimental Probability | Unit 9 Questions 3, 4, 5, 6, 9 (pp. 79-81, 84) | **Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphic displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.**  **Using the language and tools of chance to describe and predict events**   * Extends understanding of the probability continuum by expressing and comparing probabilities using decimals (between 0 and 1), ratios, fractions, and percents. * Determines the relative frequency of each outcome in an experiment involving two independent events by performing multiple trials.   **Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphic displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.**  **Drawing Conclusions by Making Inferences and Justifying Decisions Based on Data Collected**   * Compares short‐ and long‐run experimental probabilities of events to their theoretical expectations, and explains the differences. |
| SP4. Identify the sample space (where the combined sample space has 36 or fewer elements) for a probability experiment involving two independent events. | **Statistics and Probability**  **Unit 2: Probability**  8: Identifying and Representing Sample Spaces  9: Exploring Theoretical and Experimental Probability | Unit 9 Questions 2-4, 5a, 6a  (pp. 78-81) | **Big Idea: Formulating questions, collecting data, and consolidating data in visual and graphic displays help us understand, predict, and interpret situations that involve uncertainty, variability, and randomness.**  **Using the language and tools of chance to describe and predict events**   * Determines and represents theoretical probability of outcomes for two independent events (e.g., rolling a die and tossing a coin) using graphical tools (e.g., tree diagram, lists, matrix). |