## Mathletics Manitoba Curriculum Alignment with Mathletics

Supported by independent evidence-based research and practice.


Grades K - 12

## Manitoba Curriculum

## Table of Contents

Manitoba
Grade 10 Applied \& ..... 40
Pre-Calculus (20S)ManitobaGrade 10 Essential44
Mathematics (20S)
Manitoba
Grade 11 Applied ..... 46
Mathematics (30S)ManitobaGrade 11 Essential49Mathematics (30S)
Manitoba
Grade 11 Pre-Calculus ..... 52
Mathematics (30S)
Manitoba
Grade 12 Applied ..... 55Mathematics (4OS)Manitoba
Grade 12 Essential ..... 58
Mathematics (4OS)
Manitoba
Grade 12 Pre-Calculus ..... 60Mathematics (4OS)

# Manitoba Curriculum 

## Alignment with Mathletics

## Mathletics and the Manitoba Curriculum

The education team at Mathletics is committed to providing a resource that is powerful, targeted, and, most importantly, relevant to all students.

Mathletics includes well over 1200 individual adaptive practice activities and eBooks available for all grades. Our team of educational publishers has created a course that specifically follows the Manitoba curriculum. You can be assured that students have access to relevant and targeted content.

Strands, sub-strands, and learning outcomes of the curriculum are supported with activities, each with pre and post assessment. What's more, Mathletics contains an extensive library of eBooks-for use on screen or as a printable resource-that are also mapped to the requirements of the Manitoba curriculum.

This document outlines this mapping and acts as a useful guide when using Mathletics in your school.


Engage


Target


Diagnose


Assess


Report


Fluency


Mobile

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Kindergarten

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Number | MB.K.N. 1 | Say the number sequence by 1s, starting anywhere from 1 to 30 and from 10 to 1 . | Count to 5 <br> Order Numbers to 10 <br> Before, After and Between 20 <br> 1 to 30 <br> Reading Numbers to 30 <br> How Many? <br> Making Teen Numbers | Kindergarten Numbers and Patterns |
| Number | Number | MB.K.N. 2 | Subitize and name familiar arrangements of 1 to 6 dots (or objects). | How Many? How Many Dots? | Kindergarten Numbers and Patterns |
| Number | Number | MB.K.N. 3 | Relate a numeral, 1 to 10, to its respective quantity. | How Many? How Many Dots? | Kindergarten Numbers and Patterns |
| Number | Number | MB.K.N. 4 | Represent and describe numbers 2 to 10 in two parts, concretely and pictorially. | How Many? | Kindergarten Numbers and Patterns |
| Number | Number | MB.K.N. 5 | Demonstrate an understanding of counting to 10 . | How Many? <br> How Many Dots? | Kindergarten Numbers and Patterns |
| Number | Number | MB.K.N. 6 | Compare quantities, 1 to 10. | More or Less? <br> Balancing Act Balance Numbers to 10 Who has the Goods? | Kindergarten Numbers and Patterns |
| Patterns and Relations | Patterns | MB.K.PR. 1 | Demonstrate an understanding of repeating patterns (two or three elements). | Complete the Pattern Missing It! Colour Patterns Simple Patterns | Kindergarten Numbers and Patterns |
| Shape and Space | Measurement | MB.K.SS. 1 | Use direct comparison to compare two objects based on a single attribute, such as length (height), mass (weight), and volume (capacity). | Everyday Mass <br> Which Holds More? <br> Filling Fast! <br> Balancing Act <br> Same and Different <br> Everyday Length | Kindergarten Measurement |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.K.SS. 2 | Sort 3-D objects using a single attribute. | Collect the Shapes Collect the Shapes 1 Collect the Objects Collect the Objects 1 | Kindergarten Space and Shape |

## Manitoba Curriculum <br> Alignment with Mathletics

Kindergarten

| Strand | Substrand | Outcome | Outcome Description | Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.K.SS. 3 | Build and describe 3-D objects. | Collect the Shapes Collect the Shapes 1 Collect the Objects Collect the Objects 1 Match the Solid 1 Match the Solid 2 Match the Object | Kindergarten <br> Space and Shape |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 1

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Number Sense | MB.1.N. 1 | Say the number sequence by 1s forward and backward between any two given numbers (0 to 100), 2s to 30, forward starting at 0, 5s and 10 s to 100, forward starting at O | Counting Backward <br> Counting Forward <br> Going Up <br> Going Down <br> Making Big Numbers Count <br> Counting By Twos <br> Counting By Fives <br> Counting By Tens <br> Number Lines <br> 1 to 30 <br> Before, After and Between to 100 <br> Matching Numbers to 20 <br> Matching Numbers to 10 <br> Arranging Numbers | Grade 1 Numbers |
| Number | Number Sense | MB.1.N. 2 | Subitize and name familiar arrangements of 1 to 10 dots (or objects). | How Many? | Grade 1 Numbers |
| Number | Number Sense | MB.1.N. 3 | Demonstrate an understanding of counting. | Counting Backward <br> Counting Forward <br> Going Up <br> Going Down <br> Counting By Twos <br> Counting By Fives <br> Counting By Tens <br> Making Big Numbers Count <br> 1 to 30 <br> Number Lines <br> Before, After and Between to 100 <br> Matching Numbers to 20 <br> Matching Numbers to 10 <br> Arranging Numbers | Grade 1 Numbers |
| Number | Number Sense | MB.1.N. 4 | Represent and describe numbers to 20, concretely, pictorially, and symbolically. | Before, After and Between to 100 <br> Matching Numbers to 20 <br> Arranging Numbers <br> How Many? <br> How Many Blocks? <br> Making Numbers Count <br> Number Line Order | Grade 1 Numbers |
| Number | Number Sense | MB.1.N. 5 | Compare and order sets containing up to 20 elements to solve problems. | Counting by Twos Counting by Fives Counting by Tens Groups of Two Groups of Five More or Less? Comparing Groups of Objects Order Numbers to 20 | Grade 1 Operations with Number |

## Manitoba Curriculum <br> Alignment with Mathletics

Grade 1

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Number Sense | MB.1.N. 6 | Estimate quantities to 20 by using referents. | Under review | Grade 1 Operations with Number |
| Number | Number Sense | MB.1.N. 7 | Demonstrate, concretely and pictorially, how a number, up to 30, can be represented by a variety of equal groups with and without singles. | Making Equal Groups Divide Into Equal Groups Groups of Two Groups of Five | Grade 1 <br> Numbers |
| Number | Number Sense | MB.1.N. 8 | Identify the number, up to 20, that is one more, two more, one less, and two less than a given number. | Before, After and Between to 20 | Grade 1 <br> Numbers |
| Number | Number Sense | MB.1.N. 9 | Demonstrate an understanding of addition of numbers with answers to 20 and their corresponding subtraction facts, concretely, pictorially, and symbolically. | Addition Facts <br> Addition <br> Model Addition <br> Model Subtraction <br> Add and Subtract <br> Using Graphs <br> Subtraction Facts to 18 <br> All About Ten <br> All About Twenty <br> Addictive Addition <br> Simple Subtraction <br> Problems: Add and Subtract | Grade 1 Operations with Number |
| Number | Number Sense | MB.1.N. 10 | Describe and use mental mathematics strategies. | All About Ten <br> All About Twenty <br> Addictive Addition <br> Composing Additions to 20 <br> Simple Subtraction <br> Problems: Add and Subtract <br> Fact Families: Add and Subtract <br> Related Facts 1 <br> 1 More, 2 less <br> All About Ten <br> Adding to Make 5 and 10 <br> Adding to Ten | Grade 1 Operations with Number |
| Patterns and Relations | Patterns | MB.1.PR. 1 | Demonstrate an understanding of repeating patterns (two to four elements). | Simple Patterns <br> Missing it! <br> Pattern Error <br> Increasing Patterns <br> Decreasing Patterns <br> Missing Values <br> Colour Patterns <br> Balancing Act | Grade 1 <br> Patterns and Relationships |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 1

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Patterns | MB.1PR. 2 | Translate repeating patterns from one representation to another. | Simple Patterns Pattern Error Increasing Patterns Decreasing Patterns Missing Values Colour Patterns Balancing Act | Grade 1 <br> Patterns and Relationships |
| Patterns and Relations | Variables and Equations | MB.1.PR. 3 | Describe equality as a balance and inequality as an imbalance, concretely and pictorially ( 0 to 20). | Balance Numbers to 20 Balancing Act |  |
| Patterns and Relations | Variables and Equations | MB.1.PR. 4 | Record equalities using the equal symbol ( 0 to 20). | More, Less or the same to 10 More, Less or the same to 20 | Grade 1 Numbers |
| Shape and Space | Measurement | MB.1.SS. 1 | Demonstrate an understanding of measurement as a process of comparing. | Biggest Shape <br> Filling Fast! <br> Everyday Length | Grade 1 Measurement |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.1.SS. 2 | Sort 3-D objects and 2-D shapes using one attribute, and explain the sorting rule. | Sort it Collect the Shapes Collect the Objects Which Hold More? Collect Simple Shapes | Grade 1 <br> Space and Shape |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.1.SS. 3 | Replicate composite 2-D shapes and 3-D objects. | Sort it Collect the Shapes Collect the Objects | Grade 1 Space and Shape |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.1.SS. 4 | Compare 2-D shapes to parts of 3-D objects in the environment. | Match the Solid 1 Match the Object | Grade 1 Space and Shape |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 2

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Number Sense | MB.2.N. 1 | Say the number sequence from 0 to 100. | Counting by Twos Counting by Fives Counting by Tens Going Up Number Line Order Going Down Skip Counting Skip Counting with Coins Everyday Money | Grade 2 Numbers |
| Number | Number Sense | MB.2.N. 2 | Demonstrate if a number (up to 100) is even or odd. | Odd and Even Numbers 1 | Grade 2 Numbers Grade 2 Patterns and Relationships |
| Number | Number Sense | MB.2.N. 3 | Describe order or relative position using ordinal numbers. | 1st to 31st Ordinal Numbers | Grade 2 Numbers |
| Number | Number Sense | MB.2.N. 4 | Represent and describe numbers to 100, concretely, pictorially, and symbolically. | Reading Numbers to 30 Model Numbers | Grade 2 Numbers |
| Number | Number Sense | MB.2.N. 5 | Compare and order numbers up to 100 . | Arranging Numbers Number Line Order Place Value 1 Number Lines Model Numbers Understanding Place Value 1 | Grade 2 Numbers |
| Number | Number Sense | MB.2.N. 6 | Estimate quantities to 100 using referents. | Under Review | Grade 2 <br> Operations with Number |
| Number | Number Sense | MB.2.N. 7 | Illustrate, concretely and pictorially, the meaning of place value for numbers to 100. | Arranging Numbers Number Line Order Making Numbers Count Making Big Numbers Count Understanding Place Value 1 | Grade 2 Numbers |
| Number | Number Sense | MB.2.N. 8 | Demonstrate and explain the effect of adding zero to or subtracting zero from any number. | Concept of Zero | Grade 2 Numbers |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 2

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Number Sense | MB.2.N. 9 | Demonstrate an understanding of addition (limited to 1and 2-digit numerals) with answers to 100 and the corresponding subtraction. | Model Addition <br> Addictive Addition <br> Simple Subtraction Commutative Property of Addition <br> Add Two 2-Digit Numbers Adding in Any Order Bar Model Problems 1 Add Three 1-Digit Numbers Subtract Numbers Subtract Numbers: Regroup Complements to 10, 20, 50 | Grade 2 Operations with Number |
| Number | Number Sense | MB.2N. 10 | Apply mental mathematics strategies. | Related Facts 1 <br> Compensation - Add <br> Compensation - Subtract <br> Add Numbers: Regroup a Ten <br> Add 3 Numbers Using Bonds to 10 <br> Making Equal Groups <br> Adding in Any Order Commutative Property of Addition <br> How Much Change? <br> Doubles and Near Doubles <br> Doubles and Halves to 10 <br> Doubles and Halves to 20 | Grade 2 Operations with Number |
| Patterns and Relations | Patterns | MB.2.PR. 1 | Predict an element in a repeating pattern using a variety of strategies. | Simple Patterns <br> Pattern Error Increasing Patterns Describing Patterns Decreasing Patterns Missing Values Colour Patterns Count Backward Patterns Count Forward Patterns | Grade 2 <br> Patterns and Relationships |
| Patterns and Relations | Patterns | MB.2.PR. 2 | Demonstrate an understanding of increasing patterns. | Count Forward Patterns Simple Patterns Pattern Error Increasing Patterns Colour Patterns | Grade 2 <br> Patterns and Relationships |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 2

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Variables and Equations | MB.2.PR. 3 | Demonstrate and explain the meaning of equality and inequality by using manipulatives and diagrams (0 to 100). | Missing Values Balancing Act | Under review |
| Patterns and Relations | Variables and Equations | MB.2.PR. 4 | Record equalities and inequalities symbolically using the equal symbol or the not equal symbol. | Compare Numbers to 20 Compare Numbers to 100 | Grade 2 Numbers |
| Shape and Space | Measurement | MB.2.SS. 1 | Relate the number of days to a week and the number of months to a year in a problem-solving context. | Days of the Week Months of the Year Using a Calendar | Grade 2 Time and Monday |
| Shape and Space | Measurement | MB.2.SS. 2 | Relate the size of a unit of measure to the number of units (limited to nonstandard units) used to measure length and mass (weight). | Measuring Length with Blocks Everyday Length Comparing Length <br> Balancing Act <br> Everyday Mass <br> How Long is That? | Grade 2 <br> Measurement |
| Shape and Space | Measurement | MB.2.SS. 3 | Compare and order objects by length, height, distance around and mass using non-standard units and make statements of comparison. | Measuring Length with Blocks Comparing Length | Grade 2 <br> Measurement |
| Shape and Space | Measurement | MB.2.SS. 4 | Measure length to the nearest non-standard unit. | Measuring Length with Blocks Balancing Act | Grade 2 <br> Measurement |
| Shape and Space | Measurement | MB.2.SS. 5 | Demonstrate that changing the orientation of an object does not alter the measurements of its attributes. | Under Review | Under Review |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.2.SS. 6 | Sort 2-D shapes and 3-D objects using two attributes, and explain the sorting rule. | Under Review | Under Review |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.2.SS. 7 | Describe, compare, and construct 3-D objects. | Sort It <br> Collect Simple Shapes <br> Collect the Shapes <br> Collect the Shapes 1 <br> Collect the Shapes 2 <br> Collect the Objects <br> Collect the Objects 1 <br> Collect the Objects 2 | Grade 2 <br> Space and Shape |

## Manitoba Curriculum

## Grade 2

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.2.SS. 8 | Describe, compare, and construct 2-D shapes. | Sort It <br> Collect Simple Shapes Collect the Shapes Collect the Shapes 1 Collect the Shapes 2 Collect the Objects Collect the Objects 1 Collect the Objects 2 | Grade 2 Space and Shape |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.2.SS. 9 | Identify 2-D shapes as parts of 3-D objects in the environment. | Sort It <br> Collect Simple Shapes Collect the Shapes Collect the Shapes 1 Collect the Shapes 2 Collect the Objects Collect the Objects 1 Collect the Objects 2 Relate Shapes and Solids | Grade 2 Space and Shape |
| Shape and Space | Data Analysis | MB.2.SP. 1 | Gather and record data about self and others to answer questions. | Under review | Grade 2 Space and Shape |
| Statistics and Probability | Data Analysis | MB.2.SP. 2 | Construct and interpret concrete graphs and pictographs to solve problems. | Tallies <br> Making Graphs <br> Sorting Data <br> Add and Subtract Using Graphs <br> Pictographs | Grade 2 Chance and Data |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 3

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Number Sense | MB.3.N. 1 | Say the number sequence from O to 1000. | Counting by Fives Counting by Tens Skip Counting Money Who has the Money? Skip Counting with Coins | Grade 2 Numbers |
| Number | Number Sense | MB.3.N. 2 | Represent and describe numbers to 1000, concretely, pictorially, and symbolically. | Model Numbers How many Blocks? | Grade 3 <br> Reading and Understanding Whole Numbers |
| Number | Number Sense | MB.3.N. 3 | Compare and order numbers to 1000. | Which is Bigger? <br> Which is Smaller? <br> Compare Numbers to 100 <br> Ascending Order <br> Descending Order | Grade 3 <br> Reading and Understanding Whole Numbers |
| Number | Number Sense | MB.3.N. 4 | Estimate quantities less than 1000 using referents. | Nearest 10? <br> Nearest 100? | Under review |
| Number | Number Sense | MB.3.N. 5 | Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000. | How many Blocks? <br> Model Numbers <br> Understanding Place Value 1 <br> Place value 2 | Grade 3 <br> Reading and Understanding Whole Numbers |
| Number | Number Sense | MB.3.N. 6 | Describe and apply mental mathematics strategies for adding two 2-digit numerals. | Add Two 2-Digit Numbers <br> Add Two 2-Digit Numbers: Regroup <br> Complements to 50 and 100 <br> Columns that Add <br> Magic Mental Addition <br> Column Addition <br> Add Numbers: Regroup a Ten <br> Strategies for Column Addition <br> Addition Properties <br> Fact Families: Add and Subtract | Grade 3 <br> Addition and Subtraction |
| Number | Number Sense | MB.3.N. 7 | Describe and apply mental mathematics strategies for subtracting two 2-digit numerals. | 2-Digit Differences <br> 2-Digit Differences: Regroup <br> Subtract Numbers: Regroup <br> Subtraction Facts to 18 <br> Subtract Numbers <br> Decompose Numbers to Subtract <br> Columns that Subtract <br> Column Subtraction <br> Magic Mental Subtraction | Grade 3 Addition and Subtraction |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 3

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Number Sense | MB.3.N. 8 | Apply estimation strategies to predict sums and differences of two 2-digit numerals in a problem-solving context. | Estimation: Add and Subtract Estimate Sums <br> Estimate Differences | Grade 3 <br> Addition and Subtraction |
| Number | Number Sense | MB.3.N. 9 | Demonstrate an understanding of addition and subtraction of numbers with answers to 1000 (limited to 1-, 2-, and 3-digit numerals). | Add Two 2-Digit numbers 2-Digit Differences Problems: Add and Subtract | Grade 3 <br> Addition and Subtraction |
| Number | Number Sense | MB.3.N. 10 | Apply mental math strategies to determine addition facts and related subtraction facts (to 18). | Addition Properties Subtraction Facts to 18 Commutative Property of Addition Facts Fact Families: Add and Subtract Related Facts 1 | Grade 3 Addition and Subtraction |
| Number | Number Sense | MB.3.N. 11 | Demonstrate an understanding of multiplication to $5 \times 5$. | Multiplication Arrays Multiplication Facts Groups of Two Groups of Three Groups of Four Groups of Five | Grade 3 Multiplication and Division |
| Number | Number Sense | MB.3.N. 12 | Demonstrate an understanding of division. | Fill the Jars <br> Making Equal Groups <br> Divide Into Equal Groups <br> Dividing Twos <br> Dividing Threes <br> Dividing Fours <br> Dividing Fives | Grade 3 Multiplication and Division |
| Number | Number Sense | MB.3.N. 13 | Demonstrate an understanding of fractions. | Shape Fractions Model Fractions Compare Fractions 1a Compare Fractions 1b Halves and Quarters Thirds and Sixths Is it Half? | Grade 3 Fractions |
| Patterns and Relations | Patterns | MB.3.PR. 1 | Demonstrate an understanding of increasing patterns. | Simple Patterns <br> Pattern Error Increasing Patterns Colour Patterns Count Forward Patterns Describing Patterns | Grade 3 <br> Patterns and Relationships |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 3

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Patterns | MB.3.PR. 2 | Demonstrate an understanding of decreasing patterns. | Simple Patterns <br> Pattern Error <br> Describing Patterns <br> Decreasing Patterns <br> Colour Patterns <br> Count Backward Patterns | Grade 3 <br> Patterns and Relationships |
| Patterns and Relations | Variables and Equations | MB.3.PR. 3 | Solve one-step addition and subtraction equations involving symbols representing an unknown number. | Problems: Add and Subtract Word Problems with Letters Bar Model Problems 1 Bar Model Problems 2 Missing Values | Grade 3 <br> Addition and Subtraction |
| Shape and Space | Measurement | MB.3.SS. 1 | Relate the passage of time to common activities using non-standard and standard units (minutes, hours, days, weeks, months, years). | Days of the Week Months of the Year Hour Times Half Hour Times What is the Time? <br> Time Mentals Elapsed Time What Time Will it Be? Tell Time to the Half Hour Five Minute Times | Grade 3 Time |
| Shape and Space | Measurement | MB.3.SS. 2 | Relate the number of seconds to a minute, the number of minutes to an hour, and the number of days to a month in a problem-solving context. | Using a Calendar | Grade 3 Time |
| Shape and Space | Measurement | MB.3.SS. 3 | Demonstrate an understanding of measuring length ( $\mathrm{cm}, \mathrm{m}$ ). | Comparing Length Everyday Length Measuring Length How Long is That? Compare Length Compare Length 1 | Grade 3 <br> Measurement |
| Shape and Space | Measurement | MB.3.SS. 4 | Demonstrate an understanding of measuring mass ( $\mathrm{g}, \mathrm{kg}$ ). | How Heavy? Everyday Mass | Grade 3 <br> Measurement |
| Shape and Space | Measurement | MB.3.SS. 5 | Demonstrate an understanding of perimeter of regular and irregular shapes. | Perimeter of Shapes Perimeter | Grade 3 <br> Measurement |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.3.SS. 6 | Describe 3-D objects according to the shape of the faces, and the number of edges and vertices. | How many Faces? <br> How many Edges? <br> How many Corners? <br> Faces, Edges and Vertices | Grade 3 <br> Space, Shape and Position |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 3

| Strand | Substrand | Outcome | Outcome Description | Activities | eBooks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Shape and <br> Space | 3-D Objects <br> and 2-D <br> Shapes | MB.3.SS.7 | Sort regular and irregular <br> polygons. | Collect the Shapes 2 <br> Collect the Polygons | Grade 3 <br> Space, <br> and Position |
| Statistics and <br> Probability | Data Analysis | MB.3.SP.1 | Sorting Data 1 <br> Tallies <br> Bar Graphs 1 <br> and organize it. | Bar Graphs 2 <br> Interpreting Tables <br> Line Graphs: Interpretation <br> Line Graphs: Interpretation 1 | Grade 3 <br> Chance and <br> Data |
| Statistics and <br> Probability | Data Analysis | MB.3.SP.1 | Sonstruct, label, and <br> interpret bar graphs to <br> solve problems. | Sorting Data 1 <br> Tallies <br> Bar Graphs 1 <br> Interpreting Tables <br> Line Graphs: Interpretation <br> Bar Graphs 2 | Grade 3 |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 4

| Strand | Substrand | Outcome | Outcome Description | $\equiv$ Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop number sense | MB.4.N. 1 | Represent and describe whole numbers to 10 OOO, pictorially and symbolically. | Expanded Notation <br> Understanding Place Value 2 <br> Partition and rename 1 <br> Partition and rename 2 <br> Place Value to Thousands <br> Expanding Numbers <br> Numbers from Words to Digits 1 <br> Numbers from Words to Digits 2 | Grade 4 <br> Reading and Understanding Whole Numbers |
| Number | Develop number sense | MB.4.N. 2 | Compare and order numbers to 10000. | Greater Than or Less Than? <br> Ascending Order <br> Descending Order <br> Which is Greater? <br> Which is Less? | Grade 4 <br> Reading and Understanding <br> Whole <br> Numbers |
| Number | Develop number sense | MB.4.N. 3 | Demonstrate an understanding of addition of numbers with answers to 10000 and their corresponding subtractions (limited to 3- and 4-digit numerals), concretely, pictorially, and symbolically. | Adding Colossal Columns Estimation: Add and Subtract Add Three 2-Digit Numbers Add Three 2-Digit Numbers: Regroup <br> Add 3-Digit Numbers <br> Add 3-Digit Numbers: Regroup <br> Add Multi-Digit Numbers 1 <br> Add Three 3-Digit Numbers: <br> Regroup <br> Subtracting Colossal Columns <br> 3-Digit Differences <br> 3-Digit Differences: 1 Regrouping <br> 3-Digit Differences: 2 Regroupings <br> 3-Digit Differences with Zeros <br> Budgeting <br> Estimate Differences <br> Estimate Sums | Grade 4 Addition and Subtraction |
| Number | Develop number sense | MB.4.N. 4 | Explain the properties of $O$ and 1 for multiplication, and the property of 1 for division. | Under review | Under review |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 4

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop number sense | MB.4.N. 5 | Describe and apply mental mathematics strategies to develop an understanding of basic multiplication facts to $9 \times 9$ and related division facts. | Dividing Twos <br> Dividing Fives <br> Dividing Tens <br> Dividing Threes <br> Dividing Fours <br> Dividing Sixes <br> Dividing Sevens <br> Dividing Eights <br> Dividing Nines <br> Problems: Multiply and Divide <br> Problems: Times and Divide <br> Short Division <br> Divide: 1-Digit Divisor 2 <br> Long Division <br> Divisibility Tests <br> Divide: 1-Digit Divisor, Remainder <br> Divide: 1-Digit Divisor 1 | Grade 4 Multiplication and Division |
| Number | Develop number sense | MB.4.N. 6 | Demonstrate an understanding of multiplication (2- or 3-digit numerals by 1-digit numerals) to solve problems. | Multiplication Arrays <br> Fact Families: Multiply and Divide <br> Problems: Multiply and Divide <br> Multiply and Divide Problems 1 <br> Multiply Multiples of 10 <br> Multiply More Multiples of 10 <br> Multiply: 1-Digit Number, Regroup <br> Groups of Ten <br> Multiplication Facts <br> Times Tables <br> Multiplication Properties <br> Multiply: 1-Digit Number <br> Multiply: 2-Digit by 1-Digit <br> Multiply: 2-Digit Number, Regroup <br> Groups of Six <br> Groups of Seven <br> Groups of Eight <br> Groups of Nine | Grade 4 Multiplication and Division |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 4

| Strand | Substrand | Outcome | Outcome Description | EActivities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop number sense | MB.4.N. 7 | Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems. | Division Facts <br> Remainders by Arrays <br> Divide: 1-Digit Divisor 1 <br> Divide: 1-Digit Divisor 2 <br> Divide: 1-Digit Divisor, Remainder <br> Estimation: Multiply and Divide <br> Dividing Twos <br> Dividing Threes <br> Dividing Fours <br> Dividing Fives <br> Dividing Sixes <br> Dividing Sevens <br> Dividing Eights <br> Dividing Nines <br> Dividing Tens <br> Times Tables | Grade 4 Multiplication and Division |
| Number | Develop number sense | MB.4.N. 8 | Demonstrate an understanding of fractions less than or equal to one by using concrete and pictorial representations. | Partition into Equal Parts <br> Fractions of a Collection <br> Fraction Fruit Sets 1 <br> Equivalent Fraction Wall 1 <br> Fractions to Decimals <br> Counting with Fractions on a <br> Number Line <br> Identifying Fractions on a Number <br> Line <br> What Fraction is Shaded? <br> Compare Fractions 2 Comparing <br> Fractions 1 <br> Ordering Fractions | Grade 4 Fractions |
| Number | Develop number sense | MB.4.N. 9 | Describe and represent decimals (tenths and hundredths) concretely, pictorially, and symbolically. | Decimals from Words to Digits 1 Decimal Order 1 Decimals on the Number Line Decimal Place Value Comparing Decimals 1 | Grade 4 Fractions |
| Number | Develop number sense | MB.4.N. 10 | Relate decimals to fractions (to hundredths). | Decimals to Fractions 1 Decimals to Fractions 2 Fractions to Decimals | Grade 4 Fractions |
| Number | Develop number sense | MB.4.N. 11 | Demonstrate an understanding of addition and subtraction of decimals (limited to hundredths). | Add Decimals 1 <br> Nearest Whole Number <br> Rounding Decimals 1 <br> Decimal Complements <br> Subtract Decimals 1 | Grade 4 Fractions |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 4

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Use patterns to describe the world and solve problems | MB.4.PR. 1 | Identify and describe patterns found in tables and charts, including a multiplication chart. | Increasing Patterns Decreasing Patterns Missing it! Pick the Next Number Describing Patterns Pattern Error | Grade 4 <br> Patterns and Algebra |
| Patterns and Relations | Use patterns to describe the world and solve problems | MB.4.PR. 2 | Reproduce a pattern shown in a table or chart using concrete materials. | Increasing Patterns Decreasing Patterns Missing it! Pick the Next Number Describing Patterns Pattern Error Caroll Diagram | Grade 4 <br> Patterns and Algebra |
| Patterns and Relations | Use patterns to describe the world and solve problems | MB.4.PR. 3 | Represent and describe patterns and relationships using charts and tables to solve problems. | Increasing Patterns Decreasing Patterns Missing it! Pick the Next Number Describing Patterns Pattern Error Caroll Diagram | Grade 4 <br> Patterns and Algebra |
| Patterns and Relations | Use patterns to describe the world and solve problems | MB.4.PR. 4 | Identify and explain mathematical relationships using charts and diagrams to solve problems. | Venn Diagram1 Caroll Diagram | Under review |
| Patterns and Relations | Represent algebraic expressions in multiple ways | MB.4.PR. 5 | Express a problem as an equation in which a symbol is used to represent an unknown number. | Missing Values Missing Values: Decimals Find the Missing Number 1 I am Thinking of a Number! Missing Numbers: Variables | Grade 4 <br> Patterns and Algebra |
| Patterns and Relations | Represent algebraic expressions in multiple ways | MB.4.PR. 6 | Solve one-step equations involving a symbol to represent an unknown number. | Problems: Multiply and Divide 1 Problems: Add and Subtract 2 | Grade 4 <br> Patterns and Algebra |
| Shape and Space | Measurement | MB.4.SS. 1 | Read and record time using digital and analog clocks, including 24-hour clocks. | What is the Time? <br> Time Mentals <br> Elapsed Time 24 Hour Time <br> What Time Will it Be? <br> Hours and Minutes <br> Five Minute Times | Grade 4 Time |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 4

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Shape and Space | Use direct or indirect measurement to solve problems | MB.4.SS. 2 | Read and record calendar dates in a variety of formats. | Using a Calendar | Grade 4 Time |
| Shape and Space | Use direct or indirect measurement to solve problems | MB.4.SS. 3 | Demonstrate an understanding of area of regular and irregular 2-D shapes. | Area of Shapes <br> Equal Areas <br> Area: Squares and Rectangles | Grade 4 Length, Area and Perimeter |
| Shape and Space | Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them | MB.4.SS. 4 | Solve problems involving 2-D shapes and 3-D objects. | Area of Shapes <br> Equal Areas <br> Area: Squares and Rectangles | Grade 4 Length, Area and Perimeter |
| Shape and Space | Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them | MB.4.SS. 5 | Describe and construct rectangular and triangular prisms. | How Many Faces? <br> How Many Edges? <br> How Many Corners? <br> What Prism am I? <br> Faces. Edges and Vertices <br> Faces, Edges and Vertices 1 | Grade 4 Shape, Space and Position |
| Shape and Space | Describe and analyze position and motion of objects and shapes | MB.4.SS. 6 | Demonstrate an understanding of line symmetry. | Symmetry Symmetry or Not? | Grade 4 Shape, Space and Position |
| Statistics and Probability | Collect, display, and analyze data to solve problems | MB.4.SP. 1 | Demonstrate an understanding of many-to-one correspondence. | Under review | Under review |
| Statistics and Probability | Collect, display, and analyze data to solve problems | MB.4.SP. 2 | Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions. | Bar Graphs 1 <br> Bar Graphs 2 <br> Pictographs <br> Divided Bar Graphs <br> Reading from a Bar Chart | Grade 4 <br> Chance and Data |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 5

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\pm$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop Number Sense | MB.5.N. 1 | Represent and describe whole numbers to 1000000 . | Numbers in Words <br> Numbers from Words to Digits 1 <br> Numbers from Words to Digits 2 <br> Numbers from Words to Digits 3 <br> Place Value to Millions <br> Expanding Numbers <br> Partition and rename 3 <br> Expanded Notation <br> Rounding Numbers <br> Nearest 100? <br> Nearest Thousand? <br> Nearest Whole Number <br> Place Value 3 | Grade 5 <br> Reading and Understanding Whole Numbers |
| Number | Develop Number Sense | MB.5.N. 2 | Apply estimation strategies in problem solving contexts. | Estimation: Add and Subtract <br> Estimation: Multiply and Divide <br> Estimate Products <br> Estimate Sums <br> Estimate Differences <br> Estimate Quotients <br> Estimate Decimal Differences 1 <br> Estimate Decimal Sums 1 <br> Estimate Decimal Differences 2 <br> Estimate Decimal Sums 2 | Grade 5 <br> Reading and Understanding Whole Numbers |
| Number | Develop Number Sense | MB.5.N. 3 | Apply mental math strategies to determine multiplication and related division facts to $81(9 \times 9)$. | Multiplication Arrays <br> Multiplication Facts <br> Multiplication Properties <br> Mental Methods Multiplication <br> Division Facts <br> Related Facts 2 | Grade 5 Multiplication and Division |
| Number | Develop Number Sense | MB.5.N. 4 | Apply mental mathematics strategies for multiplication. | Multiplying by 10, 100, 1000 <br> Multiplication Arrays <br> Double and Halve to Multiply Multiply 2 Digits Area Model <br> Multiplication Facts <br> Multiplication Properties <br> Mental Methods Multiplication <br> Mental Methods Multiplication 2 <br> Mental Methods Multiplication 3 | Grade 5 Multiplication and Division |
| Number | Develop Number Sense | MB.5.N. 5 | Demonstrate an understanding of multiplication (1- and 2-digit multipliers and up to 4-digit multiplicands), concretely, pictorially, and symbolically. | Multiply: 1-Digit Number <br> Multiply: 1-Digit Number, Regroup <br> Multiply: 2-Digit by 1-Digit <br> Multiply: 2-Digit Number, Regroup | Grade 5 Multiplication and Division |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 5

| Strand | Substrand | Outcome | Outcome Description | \# Activities | DeBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop Number Sense | MB.5.N. 6 | Demonstrate an understanding of division (1and 2-digit divisors and up to 4-digit dividends), concretely, pictorially, and symbolically, and interpret remainders. | Division Facts <br> Mental Methods Division <br> Mental Methods Division 1 <br> Mental Methods Division 2 <br> Divide: 1-Digit Divisor 1 <br> Divide: 1-Digit Divisor 2 <br> Divide: 1-Digit Divisor, <br> Remainder <br> Compatible Numbers <br> Divisibility Tests <br> Tests of Divisibility 1 <br> Divisibility Tests $(2,5,10)$ <br> Divisibility Tests (3, 4, 9) <br> Remainders by Arrays <br> Short Division | Grade 5 Multiplication and Division |
| Number | Develop Number Sense | MB.5.N. 7 | Demonstrate an understanding of fractions by using concrete and pictorial representations. | Shading Equivalent <br> Fractions <br> Ordering Fractions <br> Simplifying Fractions <br> Decimals to Fractions 1 <br> Decimals to Fractions 2 <br> Comparing Fractions 1 <br> Comparing Fractions 2 <br> Equivalent Fraction Wall 2 <br> Fraction Fruit Sets 2 <br> Equivalent Fractions on a Number Line 2 | Grade 5 <br> Fractions, Decimals and Percentages |
| Number | Develop Number Sense | MB.5.N. 8 | Describe and represent decimals (tenths, hundredths, thousandths) concretely, pictorially, and symbolically. | Rounding Decimals <br> Rounding Decimals 1 <br> Rounding Decimals 2 <br> Decimal Complements <br> Decimals on a Number <br> Line <br> Decimals on the Number <br> Line <br> Decimals from Words to Digits 2 <br> Decimal Place Value | Grade 5 <br> Fractions, Decimals and Percentages |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 5

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square \mathrm{eBooks}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop Number Sense | MB.5.N. 9 | Relate decimals to fractions (tenths, hundredths, thousandths) | Decimals to Fractions 1 Decimals to Fractions 2 Fractions to Decimals Fractions to Decimals 2 Fraction to Terminating Decimal | Grade 5 Fractions, Decimals and Percentages |
| Number | Develop Number Sense | MB.5.N.10 | Compare and order decimals (tenths, hundredths, thousandths). | Decimal Order Comparing Decimals Comparing Decimals 1 Comparing Decimals 2 | Grade 5 Fractions, Decimals and Percentages |
| Number | Develop Number Sense | MB.5.N. 11 | Demonstrate an understanding of addition and subtraction of decimals (limited to thousandths). | Subtract Decimals 1 <br> Subtract Decimals 2 <br> Subtracting Decimals <br> Add Decimals 1 <br> Add Decimals 2 <br> Adding and Subtracting <br> Decimals <br> Adding Decimals | Grade 5 Fractions, Decimals and Percentages |
| Patterns and Relations | Patterns | MB.5.PR. 1 | Determine the pattern rule to make predictions about subsequent elements. | Describing Patterns I am Thinking of a Number! Pattern Error | Grade 5 Patterns and Algebra |
| Patterns and Relations | Variables and Equations | MB.5.PR. 2 | Solve problems involving single-variable (expressed as symbols or letters), one-step equations with whole-number coefficients, and whole-number solutions. | Solve Equations: Add, Subtract 1 <br> Solve Equations: Multiply, Divide 1 <br> Problems: Multiply and Divide 1 <br> Problems: Add and Subtract 1 <br> Find the Missing Number 1 <br> Find the Missing Number 2 <br> Missing Values <br> Missing Numbers | Grade 5 Patterns and Algebra |
| Shape and Space | Measurement | MB.5.SS. 1 | Design and construct different rectangles given either perimeter or area, or both (whole numbers), and draw conclusions. | Perimeter of Shapes <br> Perimeter <br> Perimeter: Squares and <br> Rectangles <br> Perimeter Detectives 1 <br> Perimeter, Area, Dimension <br> Change <br> Equal Areas <br> Areas of Shapes | Grade 5 Length, Perimeter and Area |
| Shape and Space | Measurement | MB.5.SS. 2 | Demonstrate an understanding of measuring length (mm). | Converting cm and mm Converting Units of Length Centimetres and Metres Measuring Length | Grade 5 Length, Perimeter and Area |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 5

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Shape and Space | Measurement | MB.5.SS. 3 | Demonstrate an understanding of volume. | Volume: Cuboid 1 <br> Volume: Rectangular <br> Prisms 1 | Grade 5 Volume, Capacity and Mass |
| Shape and Space | Measurement | MB.5.SS. 4 | Demonstrate an understanding of capacity. | Millilitres and Litres Capacity Word Problems | Grade 5 Volume, Capacity and Mass |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.5.SS. 5 | Describe and provide examples of edges and faces of 3-D objects, and sides of 2-D shapes. | Faces, Edges and Vertices Faces, Edged and Vertices 1 | Grade 5 Geometry |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.5.SS. 6 | Identify and sort quadrilaterals. | Collect the Shapes 2 Collect the Objects 2 Collect the Polygons Shapes | Grade 5 Geometry |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.5.SS. 7 | Perform a single transformation (translation, rotation, or reflection) of a 2-D shape, and draw and describe the image. | Transformations Flip, Slide, Turn | Grade 5 Geometry |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.5.SS. 8 | Identify a single transformation (translation, rotation, or reflection) of 2-D shapes. | Transformations Flip, Slide, Turn | Grade 5 Geometry |
| Statistics and Probability | Data Analysis | MB.5.SP. 1 | Differentiate between firsthand and second-hand data. | Under Review | Grade 5 <br> Chance and Data |
| Statistics and Probability | Data Analysis | MB.5.SP. 2 | Construct and interpret double bar graphs to draw conclusion. | Bar Graphs 2 Interpreting Tables | Grade 5 <br> Chance and Data |
| Statistics and Probability | Chance and Uncertainty | MB.5.SP. 3 | Describe the likelihood of a single outcome occurring. | What are the Chances? <br> How many Combinations? <br> Most Likely and Least <br> Likely <br> Possible Outcomes <br> Fair Games | Grade 5 Chance and Data |
| Statistics and Probability | Chance and Uncertainty | MB.5.SP. 4 | Compare the likelihood of two possible outcomes occurring. | What are the Chances? <br> How many Combinations? <br> Most Likely and Least <br> Likely <br> Possible Outcomes <br> Fair Games | Grade 5 Chance and Data |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 6

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Place Value | MB.6.N. 1 | Demonstrate an understanding of place value for numbers. | Place Value to Billions <br> Place value 3 <br> Comparing Numbers <br> Decimal Order 1 <br> Decimal Order 2 <br> Comparing Decimals 2 <br> Understanding Place Value 3 <br> Numbers from Words to Digits 3 | Grade 6 Reading and Understanding Whole Numbers |
| Number | Place Value | MB.6.N. 2 | Solve problems involving large numbers. | Estimate Decimal Differences 2 <br> Estimate Decimal Sums 2 <br> Estimate Sums <br> Estimate Products <br> Estimate Quotients <br> Estimate Decimal Operations <br> Estimate Differences <br> Adding Colossal Columns <br> Subtracting Colossal Columns <br> Long Multiplication <br> Multiplying by 10, 100, and 1000 <br> Dividing by 10, 100, 1000 <br> Rounding Numbers <br> Order of Operations 1 (BEDMAS) | Grade 6 Fractions, Decimals and Percentages |
| Number | Factors and Multiples | MB.6.N. 3 | Demonstrate an understanding of factors and multiples. | Least Common Multiple <br> Multiples <br> Product of Prime Factors <br> Factors <br> Find the Factor <br> Greatest Common Factor <br> Prime or Composite? <br> Prime Factoring | Grade 7 Whole Numbers |
| Number | Improper <br> Fractions <br> Mixed <br> Numbers | MB.6.N. 4 | Relate improper fractions to mixed numbers. | Converting Mixed and Improper <br> Mixed to Improper <br> Improper to Mixed <br> Comparing Fractions 2 <br> Identifying fractions beyond 1 <br> Mixed and Improper Numbers <br> on a Number Line <br> What Mixed Number is Shaded? | Grade 6 Fractions, Decimals and Percentages |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 6

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Ratios | MB.6.N. 5 | Demonstrate an understanding of ratio, concretely, pictorially, and symbolically. | Ratio <br> Ratios <br> Equivalent Ratios <br> Dividing a Quantity in a Ratio <br> Ratio Word Problems <br> Ratio and Proportion <br> Solve Proportions <br> Unitary Method <br> Best Buy <br> Fractions to Decimals <br> Fractions to Decimals 2 | Grade 9 Decimals |
| Number | Percents | MB.6.N. 6 | Demonstrate an understanding of percent (limited to whole numbers), concretely, pictorially, and symbolically. | Calculating Percentages <br> Percent of a Number <br> Decimal to Percentage <br> Percents and Decimals <br> Percentage of a Quantity <br> Percents to Fractions <br> Percent Increase and Decrease <br> Percentage Composition <br> Percentage Word Problems <br> Solve Percent Equations <br> Modelling Percentages <br> Match Decimals and Percentages <br> What Percentage? | Grade 6 Fractions, Decimals and Percentages |
| Number | Integers | MB.6.N. 7 | Demonstrate an understanding of integers, concretely, pictorially, and symbolically. | Integers: Add and Subtract <br> Add Integers <br> Ordering Integers <br> Comparing Integers <br> More with Integers <br> Integers on a Number Line <br> Integers: Order of Operations (BEDMAS) <br> Order of Operations 1 (BEMAS) <br> Subtract Integers | Grade 7 Directed Numbers |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 6

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\pm$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Decimals | MB.6.N. 8 | Demonstrate an understanding of multiplication and division of decimals (involving 1-digit wholenumber multipliers, 1-digit natural number divisors, and multipliers and divisors that are multiples of 10), concretely, pictorially, and symbolically. | Decimal by Whole Number Multiply Decimals and Powers of 10 <br> Multiply Decimals: 10, 100, 1000 <br> Divide Decimals: 10, 100, 1000 <br> Divide by Powers of 10 <br> Divide Decimal by Whole Number <br> Decimal by Whole Number <br> Missing Values: Decimals <br> Rounding Decimals 1 <br> Rounding Decimals 2 | Grade 6 Multiplication and Division |
| Number | Number | MB.6.N. 9 | Explain and apply the order of operations, excluding exponents (limited to whole numbers). | Integers: Order of Operations (BEDMAS) <br> Order of Operations 1: (BEDMAS) | Under review |
| Patterns and Relations | Patterms | MB.6.PR. 1 | Demonstrate an understanding of the relationships within tables of values to solve problems. | Table of Values Find the Pattern Rule Find the Function Rule Pattern Rules and Tables Function Rules and Tables | Grade 6 <br> Patterns and Algebra |
| Patterns and Relations | Patterms | MB.6.PR. 2 | Represent and describe patterns and relationships using graphs and tables. | Ordered Pairs <br> Coordinate Graphs <br> Coordinate Graphs: 1st Quadrant Graphing from a Table of Values | Grade 6 <br> Position Grade 7 The Number Plane |
| Patterns and Relations | Variables and Equations | MB.6.PR. 3 | Represent generalizations arising from number relationships using equations with letter variables. | Commutative Property of Addition Multiplication Properties <br> Write an Equation: Word Problems <br> Writing Equations <br> Writing Algebraic Expressions <br> Solving Simple Equations <br> Missing Numbers: Variables <br> Magic Symbols 2 <br> Pyramid Puzzles 2 | Grade 6 <br> Patterns and Algebra |
| Patterns and Relations | Variables and Equations | MB.6.PR. 4 | Demonstrate and explain the meaning of preservation of equality. | Writing Equations Writing Algebraic Expressions Write an Equation: Word Problems | Grade 6 <br> Patterns and Algebra |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 6

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square \mathrm{eBooks}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Shape and Space | Measurement | MB.6.SS. 1 | Demonstrate an understanding of angles. | Equal Angles <br> Comparing Angles <br> Classifying Angles <br> Measuring Angles <br> Estimating Angles <br> Labelling Angles <br> Triangles: Acute, Right, Obtuse | Grade 6 Geometry |
| Shape and Space | Measurement | MB.6.SS. 2 | Sum of interior angles is the same for all triangles and quadrilaterals. | Angle Sum of a Triangle Angle Measures in a Triangle Angle Sum of a Quadrilateral | Grade 7 Angles and Polygons |
| Shape and Space | Measurement | MB.6.SS. 3 | Develop and apply a formula for determining the perimeter of polygons, area of rectangles and volume of right rectangular prisms. | Perimeter: Squares and <br> Rectangles <br> Perimeter: Composite Shapes <br> Perimeter Detectives 1 <br> Perimeter Detectives 2 <br> Perimeter: Triangles <br> Perimeter: Triangles 2 <br> Area: Squares and Rectangles <br> Area: Squares and Rectangles 1 <br> Area: Squares and Rectangles 2 <br> Volume: Rectangular Prisms 2 <br> Volume: Rectangular Prisms 1 | Grade 6 Length, Perimeter and Area Grade 6 Volume, Capacity and Mass |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.6.SS. 4 | Construct and compare triangles. | Angle Sum of a Triangle Angle Measures in a Triangle | Grade 7 Angles and Polygons |
| Shape and Space | 3-D Objects and 2-D Shapes | MB.6.SS. 5 | Describe and compare the sides and angles of regular and irregular polygons. | Under review | Grade 6 Geometry |
| Shape and Space | Transformations | MB.6.SS. 6 | Perform a combination of transformations (translations, rotations, or reflections) on a single 2-D shape, and draw and describe the image. | Congruent Figures | Grade 6 Geometry |
| Shape and Space | Transformations | MB.6.SS. 7 | Perform a combination of successive transformations of 2-D shapes to create a design, and identify and describe the transformations. | Flip, Slide, Turn Transformations | Grade 6 Geometry |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 6

| Strand | Substrand | Outcome | Outcome Description | 1 Activities | $\square \mathrm{eBooks}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Shape and Space | Transformations | MB.6.SS. 8 | Identify and plot points in the first quadrant of a Cartesian plane using whole-number ordered pairs. | Ordered Pairs Coordinate Graphs Coordinate Graphs: 1st Quadrant | Grade 6 <br> Position Grade 7 The Number Plane |
| Shape and Space | Transformations | MB.6.SS. 9 | Perform and describe single transformations of a 2-D shape in the first quadrant of a Cartesian plane (limited to whole-number vertices). | Transformations: Coordinate Plane | Grade 6 <br> Position <br> Grade 7 The <br> Number Plane |
| Statistics and Probability | Data Analysis | MB.6.SP. 1 | Create, label, and interpret line graphs to draw conclusions. | Line Graphs: Interpretation | Grade 6 <br> Position <br> Grade 7 The Number Plane |
| Statistics and Probability | Data Analysis | MB.6.SP. 2 | Select, justify, and use appropriate methods of collecting data. | Under review | Under review |
| Statistics and Probability | Data Analysis | MB.6.SP. 3 | Graph collected data and analyze the graph to solve problems. | Pie Charts <br> Pie Chart Calculations <br> Circle Graphs <br> Stem and Leaf Introduction <br> Bar Graphs 1 <br> Column Graphs <br> Bar Graphs 2 <br> Divided Bar Graphs <br> Compound Bar Chart <br> Stem-and-Leaf Plots | Grade 9 Data |
| Statistics and Probability | Chance and Uncertainty | MB.6.SP. 4 | Demonstrate an understanding of probability. | What are the Chances? <br> Will it Happen? <br> Probability Scale | Grade 6 Chance and Probability Grade 7 Chance |

Mathletics

## Grade 7

| Strand | Substrand | Outcome | Outcome Description | 國 Activities | $\square \mathrm{d}$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develope Number Sense | MB.7.N. 1 | 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 . | Divisibility Tests <br> Divisibility Tests $(2,5,10)$ <br> Divisibility Tests $(3,4,9)$ <br> Product of Prime Factors <br> Factors <br> Tests of Divisibility 1 <br> Prime or Composite? <br> Greatest Common Factor | Under review |
| Number | Develope Number Sense | MB.7.N. 2 | Demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, technology could be used). | Adding Decimals Add Decimals 2 <br> Subtract Decimals 1 <br> Decimal Complements <br> Subtract Decimals 2 <br> Multiply Decimals: 10, 100, 1000 <br> Divide Decimals: 10, 100, 1000 <br> Divide Decimal by Whole Number <br> Multiply Decimals and Powers of 10 <br> Missing Values: Decimals <br> Adding and Subtracting Decimals <br> Decimal by Whole Number <br> Decimal by Decimal <br> Divide Decimal by Decimal <br> Divide by Powers of 10 <br> Estimate Decimal Sums 1 <br> Estimate Decimals Sums 2 <br> Estimate Decimal Differences 1 <br> Estimate Decimal Differences 2 <br> Rounding Decimals <br> Rounding Decimals 1 <br> Rounding Decimals 2 <br> Estimate Decimal Operations | Grade 7 <br> Decimals |
| Number | Develope Number Sense | MB.7.N. 3 | Solve problems involving percents from $1 \%$ to $100 \%$. | Percents to Fraction <br> Percentage to Fraction <br> Decimal to Percentage <br> Percents and Decimals <br> Percentage Word Problems <br> Percentage of a Quantity <br> Percent Increase and Decrease <br> Calculating Percentages <br> Percent of a Number | Grade 7 <br> Percentage <br> Basics |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 7

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develope Number Sense | MB.7.N. 4 | Demonstrate an understanding of the relationship between repeating decimals and fractions, and terminating decimals and fractions. | Fraction to Terminating Decimal <br> Fractions to Decimals <br> Fractions to Decimals 2 <br> Recurring Decimals <br> Decimals to Fractions 1 <br> Decimals to Fractions 2 <br> Recurring Decimals and Series | Grade 7 <br> Percentage <br> Basics |
| Number | Develope Number Sense | MB.7.N. 5 | Demonstrate an understanding of adding and subtracting positive fractions and mixed numbers, with like and unlike denominators, concretely, pictorially, and symbolically (limited to positive sums and differences). | Add: Common Denominator Add Mixed Numbers: Same Sign Add Like Mixed Numbers Add Unlike Mixed Numbers Add Unlike Fractions Subtract Unlike Fractions Mixed to Improper Improper to Mixed <br> Subtract: Common Denominator Subtract: No Common Denominator <br> Subtract Unlike Mixed Numbers Simplifying Fractions Add: No Common Denominator Add Subtract Fractions 1 Subtract Like Mixed Numbers One Take Fraction <br> Subtract Mixed Numbers: Renaming Equivalent Fractions | Grade 7 <br> Fractions |
| Number | Develope Number Sense | MB.7.N. 6 | Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially, and symbolically. | Directed Numbers Integers: Add and Subtract More with Integers Integers on a Number Line Add Integers Subtract Integers Negative or Positive? | Grade 7 <br> Directed <br> Numbers |
| Number | Develope Number Sense | MB.7.N. 7 | Compare and order fractions, decimals (to thousandths), and integers. | Ordering Fractions <br> Ordering Integers <br> Comparing Integers <br> Decimals on a Number Line <br> Decimal Order 1 <br> Comparing Decimals <br> Comparing Fractions 1 <br> Comparing Fractions 2 | Grade 7 <br> Fractions Grade 7 Decimals |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 7

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Patterns | MB.7.PR. 1 | Demonstrate an understanding of oral and written patterns and their corresponding relations. | Under Review | Under Review |
| Patterns and Relations | Patterns | MB.7.PR. 2 | Construct a table of values from a relation, graph the table of values, and analyze the graph to draw conclusions and solve problems. | Pattern Rules and Tables Table of Values Find the Pattern Rule | Grade 7 <br> Algebra Basics Grade 8 Linear Relationships |
| Patterns and Relations | Variables and Equations | MB.7.PR. 3 | Demonstrate an understanding of preservation of equality by modelling preservation of equality, concretely, pictorially, and symbolically and applying preservation of equality to solve equations. | Graphing from a Table of Values Which Straight Line? <br> Ordered Pairs <br> Equation of a Line 1 <br> Equation of a Line 2 <br> Equation of a Line 3 <br> Reading Values from a Line $y=a x$ <br> Patterns, Rules and Equations | Grade 7 <br> Algebra Basics Grade 8 Linear Relationships |
| Patterns and Relations | Variables and Equations | MB.7.PR. 4 | Explain the difference between an expression and an equation. | Write an Equation: Word Problems <br> Writing Algebraic Expressions Writing Equations | Grade 7 <br> Algebra Basics Grade 8 Linear Relationships |
| Patterns and Relations | Variables and Equations | MB.7.PR. 5 | Evaluate an expression given the value of the variable(s). | Simple Substitution 1 | Grade 7 <br> Algebra Basics |
| Patterns and Relations | Variables and Equations | MB.7.PR. 6 | Model and solve problems that can be represented by onestep linear equations of the form $x+a=b$, concretely, pictorially, and symbolically, where $a$ and $b$ are integer. | Solving Simple Equations More Substitution in Formulae Solving More Equations Solve Equations: Add, Subtract 2 Solve Equations: Multiply, Divide 2 | Grade 8 Equations |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 7

| Strand | Substrand | Outcome | Outcome Description | $\#$ Activities | $\pm$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Variables and Equations | MB.7.PR. 7 | Model and solve problems that can be represented by linear equations. | Solving Simple Equations Solving More Equations Equations: Variables, Both Sides <br> Solve Multi-Step Equations Solve Two-Step Equations Missing Numbers: Variables Equations with Fractions Equations with Decimals Equations to Solve Problems Checking Solutions | Grade 8 Equations |
| Shape and Space | Measurement | MB.7.SS. 1 | Demonstrate an understanding of circles by describing the relationships among radius, diameter, and circumference of circles relating circumference to Pl , 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. | Circle Terms <br> Circumference: Circles <br> Labelling Circles <br> Identify Parts of Circles 1 <br> Identify Parts of Circles 2 | Under review |
| Shape and Space | Measurement | MB.7.SS. 2 | Develop and apply a formula for determining the area of triangles, parallelograms and circles. | Area: Triangles <br> Area: Right Angled Triangles <br> Area: Quadrilaterals <br> Area: Circles <br> Area: Parallelograms | Grade 7 Area and Perimeter |
| Shape and Space | 3-D objects and 2-D shapes | MB.7.SS. 3 | Perform geometric constructions, including perpendicular line segments, parallel line segments, perpendicular bisectors and angle bisectors. | Parallel Lines <br> What Line am I? | Grade 7 The Number Plane |
| Shape and Space | Transformations | MB.7.SS. 4 | Identify and plot points in the four quadrants of a Cartesian plane using ordered pairs. | Ordered Pairs | Grade 7 The Number Plane |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 7

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Shape and Space | Transformations | MB.7.SS. 5 | Perform and describe transformations of a 2-D shape in all four quadrants of a Cartesian plane (limited to integral vertices). | Transformations <br> Rotations: Coordinate Plane <br> Transformations: Coordinate <br> Plane <br> Flip, Slide, Turn <br> Symmetry <br> Symmetry or Not? <br> Rotational Symmetry | Under review |
| Statistics and Probability | Data Analysis | MB.7.SP. 1 | Demonstrate an understanding of central tendency and range by determining the measures of central tendency (mean, median, mode) and range and determining the most appropriate measures of central tendency to report findings. | Mean <br> Median <br> Mode <br> Mean from Frequency Table <br> Median from Frequency <br> Mode from Frequency Table | Grade 9 Data |
| Statistics and Probability | Data Analysis | MB.7.SP. 2 | Determine the effect on the mean, median, and mode when an outlier is included in a data set. | Under review | Under review |
| Statistics and Probability | Data Analysis | MB.7.SP. 3 | Construct, label, and interpret circle graphs to solve problems. | Creating a Sector Graph Sector Graph Calculations Sector Graph Angles Sector Graphs | Grade 9 Data |
| Statistics and Probability | Chance and Uncertainty | MB.7.SP. 4 | Express probabilities as ratios, fractions, and percents. | Probability Scale Ratios Simple Probability Find the Probability | Grade 7 Chance |
| Statistics and Probability | Chance and Uncertainty | MB.7.SP. 5 | Identify the sample space (where the combined sample space has 36 or fewer elements) for a probability experiment involving two independent events. | Dice and Coins <br> Two-way Table Probability <br> Tree Diagrams <br> Venn Diagrams | Grade 7 Chance |
| Statistics and Probability | Chance and Uncertainty | MB.7.SP. 6 | Conduct a probability experiment to compare the theoretical probability (determined using a tree diagram, table, or another graphic organizer) and experimental probability of two independent events. | Dice and Coins <br> Two-way Table Probability <br> Probability Tables <br> Probability With <br> Replacement <br> Probability Without <br> Replacement <br> Complementary Events | Grade 7 Chance |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 8

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop number sense | MB.8.N. 1 | Demonstrate an understanding of perfect squares and square roots, concretely, pictorially, and symbolically (limited to whole numbers). | Square Roots Equations with Square Roots | Under review |
| Number | Develop number sense | MB.8.N. 2 | Determine the approximate square root of numbers that are not perfect squares (limited to whole numbers). | Estimating Square Roots Estimate Square Roots | Under review |
| Number | Develop number sense | MB.8.N. 3 | Demonstrate an understanding of percents greater than or equal to 0\%. | Percentage of a Quantity <br> Calculating Percentages <br> Percentage to Fraction <br> Decimal to Percentage <br> Percents and Decimals <br> Decimals to Fractions 2 <br> Fraction to Terminating Decimal <br> Fractions to Decimals 2 <br> Percentage Word Problems <br> Percentage Increase and <br> Decrease <br> Solve Percent Equations <br> Percentage Composition | Grade 8 Percentage Calculations |
| Number | Develop number sense | MB.8.N. 4 | Demonstrate an understanding of ratio and rate. | Rate Word Problems <br> Ratios <br> Rates <br> Rates Word Problems <br> Equivalent Ratios <br> Dividing a Quantity in a Ratio <br> Ratio Word Problems <br> Rates Calculation <br> Ratio and Proportion <br> Solve Proportions | Grade 8 Percentage Calculations |
| Number | Develop number sense | MB.8.N. 5 | Solve problems that involve rates, ratios, and proportional reasoning. | Ratio Word Problems Percentage Word Problems Rate Word Problems | Grade 7 Fractions |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 8

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop number sense | MB.8.N. 6 | Demonstrate an understanding of multiplying and dividing positive fractions and mixed numbers, concretely, pictorially, and symbolically. | Operations with Fractions Converting Mixed and Improper Add Unlike Mixed Numbers Subtract Unlike Mixed Numbers Model Fractions to Multiply Multiply Mixed Numbers Divide Fractions by Fractions 1 <br> Divide Fractions by Fractions 2 <br> Divide Mixed Numbers <br> Fraction Word Problems <br> Divide by a Unit Fraction <br> Divide Fractions Visual Model <br> Multiplying Fractions <br> Multiply Two Fractions 1 <br> Multiply Two Fractions 2 | Grade 7 <br> Fractions |
| Number | Develop number sense | MB.8.N. 7 | Demonstrate an understanding of multiplication and division of integers, concretely, pictorially, and symbolically. | Integers: Multiply and Divide Integers: Multiply and Divide 1 Integers: Order of Operations (BEDMAS) <br> More with Integers <br> Order of Operations 1 (BEDMAS) | Grade 7 Whole Numbers |
| Number | Develop number sense | MB.8.N. 8 | Solve problems involving positive rational numbers. | Fraction Word Problems Ratio Word Problems Percentage Word Problems Rate Word Problems | Grade 7 <br> Fractions |
| Patterns and Relations | Use patterns to describe the world and solve problems | MB.8.PR. 1 | Graph and analyze twovariable linear relations. | Pattern Rules and Tables <br> Find the Pattern Rule <br> Find the Function Rule <br> Ordered Pairs <br> Table of Values <br> Reading Values from a Line <br> Graphing from a Table of Values 2 $y=a x$ <br> Determining a Rule for a Line <br> Which Straight Line? <br> Equation of a Line 2 | Grade 8 Linear Relationships |
| Patterns and Relations | Represent algebraic expressions in multiple ways | MB.8.PR. 2 | Model and solve problems using linear equations. | Equations to Solve Problems Solving More Equations Solve Equations: Add, Subtract 2 Solve Equations: Multiply, Divide 2 Equations with Fractions Equations with Grouping Symbols | Grade 8 Equations |
| Shape and Space | Use direct or indirect measurement to solve problems | MB.8.SS. 1 | Develop and apply the Pythagorean theorem to solve problems. | Pythagoras' Theorem <br> Pythagorean Triads <br> Hypotenuse of a Right Triangle | Grade 8 Pythagors' Theorem |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 8

| Strand | Substrand | Outcome | Outcome Description | Al Activities | eBooks |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Shape and <br> Space | Use direct or indirect <br> measurement to solve <br> problems | MB.8.SS.2 | Draw and construct nets <br> for 3-D objects. | Nets | Grade <br> Shape asuring <br> Space | Use direct or indirect <br> measurement to solve <br> problems |
| Spalids |  |  |  |  |  |  |

Mathletics

## Grade 9 (10F)

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develop Number Sense | MB.9.N. 1 | Demonstrate an understanding of powers with integral bases excluding base O) and whole-number exponents. | Exponent Notation <br> Exponent Form to Numbers <br> The Zero Exponent <br> Simplifying with Exponent Laws 1 <br> Simplifying with Exponent Laws 2 <br> Irrational Number to Exponent Form | Grade 9 Exponents |
| Number | Develop Number Sense | MB.9.N. 2 | Demonstrate an understanding of operations on powers with integral bases (excluding base O) and wholenumber exponents. | Simplifying with Exponent Laws 1 <br> Simplifying with Exponential Laws 2 | Grade 9 Exponents |
| Number | Develop Number Sense | MB.9.N. 3 | Demonstrate an understanding of rational numbers. | Ordering Fractions <br> Comparing Fractions 2 <br> Decimals on a Number Line <br> Comparing Fractions with Signs <br> Equivalent Fractions <br> Multiplying Fractions <br> Common Denominator <br> Converting Mixed and Improper <br> No Common Denominator <br> Decimal Order <br> Add Like Mixed Numbers <br> Subtract Like Mixed Numbers <br> Divide Fractions by Fractions 1 <br> Decimal by Decimal <br> Divide Decimal by Decimal | Grade 7 Fractions |
| Number | Develop Number Sense | MB.9.N. 4 | Explain and apply the order of operations, including exponents. | Integers: Order of Operations (BEDMAS) <br> Order of Operation 1 <br> (BEDMAS) | Grade 9 Exponents |
| Number | Develop Number Sense | MB.9.N. 5 | Determine the square root of positive rational numbers that are perfect squares. | Square Roots 1 <br> Estimate Square Roots | Grade 9 Exponents |
| Number | Develop Number Sense | MB.9.N. 6 | Determine an approximate square root of positive rational numbers that are non-perfect squares. | Estimate Square Roots | Grade 9 <br> Exponents |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 9 (10F)

| Strand | Substrand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Use patterns | MB.9.PR. 1 | Generalize a pattern arising from a problem solving context using linear equations and verify by substitution. | Table of Values Find the Pattern Rule Pattern Rules and Tables $y=a x$ | Grade 9 Linear Relationships |
| Patterns and Relations | Use patterns | MB.9.PR. 2 | Graph linear relations, analyze the graph and interpolate or extrapolate to solve problems. | Graphing from a Table of Values 2 Horizontal and Vertical Lines $y=a x$ <br> Which Straight Line? <br> Equation of a Line 2 <br> Equation of a Line 3 <br> Reading Values from a Line <br> Conversion Graphs | Grade 9 Linear Relationships |
| Patterns and Relations | Represent algebraic expressions | MB.9.PR. 3 | Model and solve problems using linear equations. | Solving Simple Equations Solving More Equations Equations with Grouping Symbols Equations with Decimals Equations with Fractions Equations to Solve Problems Equations with Fractions 2 Checking Solutions | Grade 9 Equations and Inequalities |
| Patterns and Relations | Represent algebraic expressions | MB.9.PR. 3 | Model and solve problems using linear equations. | Checking Solutions | Grade 9 Equations and Inequalities |
| Patterns and Relations | Represent algebraic expressions | MB.9.PR. 4 | Solve single variable linear inequalities with rational coefficients. | Solving Inequalities 1 Checking Solutions Solving Inequalities 2 Graphing Inequalities 1 Graphing Inequalities 3 | Grade 9 <br> Equations and Inequalities |
| Patterns and Relations | Represent algebraic expressions | MB.9.PR. 4 | Determine if a given rational number is a possible solution of a given linear inequality. | Checking Solutions | Grade 9 Equations and Inequalities |
| Patterns and Relations | Represent algebraic expressions | MB.9.PR. 5 | Identify the variables, degree, number of terms, and coefficients, including the constant term, of a given simplified polynomial expression. | Solving Simple Equations <br> Solving More Equations <br> Equations with Grouping Symbols <br> Equations with Decimals <br> Equations with Fractions <br> Equations to Solve Problems <br> Order of Operations 1 (BEDMAS) | Grade 9 <br> Equations and Inequalities |
| Patterns and Relations | Represent algebraic expressions | MB.9.PR. 6 | Addition and subtraction of polynomial expressions. | Recognizing Like Terms Like Terms: Add, Subtract | Grade 7 <br> Algebra Basics |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 9 (10F)

| Strand | Substrand | Outcome | Outcome Description | \# Activities | $\square \mathrm{eBooks}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Patterns and Relations | Represent algebraic expressions | MB.9.PR. 7 | Multiplication and division of polynomial expressions (limited to polynomials of degree less than or equal to 2). | Algebraic Multiplication Expanding Brackets Using the Distributive Property Expanding with Negatives Expand then Simplify Dividing Expressions Algebraic Fractions 1 | Grade 7 <br> Algebra Basics |
| Shape and Space | Use direct or indirect measurement | MB.9.SS. 1 | Solve problems and justify the solution strategy using circle properties. | Circle Terms Circle Theorem | Grade 10 Chords and Angles Grade 10 Tangents and Secants |
| Shape and Space | 3-D objects and 2-D shapes | MB.9.SS. 2 | Determine the surface area of composite 3-D objects to solve problems. | Surface Area: Rectangular Prisms <br> Surface Area: Triangular Prisms <br> Surface Area: Cylinders | Grade 9 <br> Measuring <br> Solids |
| Shape and Space | 3-D objects and 2-D shapes | MB.9.SS. 3 | Similarity of polygons | Similar Figures 1 <br> Similar Figures 2 <br> Using Similar Triangles <br> Using Similar Triangles 1 <br> Similarity Proofs | Grade 9 <br> Similarity and Congruence |
| Shape and Space | position and motion | MB.9.SS. 4 | Draw and interpret scale diagrams of 2-D shape. | Scale Factor Using Similar Triangles | Grade 9 <br> Similarity and Congruence |
| Shape and Space | position and motion | MB.9.SS. 5 | Demonstrate an understanding of line and rotation symmetry. | Symmetry or Not? <br> Transformations <br> Symmetry <br> Rotational Symmetry <br> Flip, Slide, Turn <br> Rotations: Coordinate Plane | Under review |
| Statistics and Probability | theoretical probabilities | MB.9.SP. 4 | Demonstrate an understanding of the role of probability in society. | Simple Probability <br> Simple Probability 1 <br> Probability Scale <br> Probability Tables <br> Probability With Replacement <br> Probability Without <br> Replacement <br> Find the Probability <br> Probability without <br> Replacement 1 <br> Two-way Table Probability | Grade 9 Probability |

## Grade 10 Applied \& Pre-Calculus (20S)

| Strand | Substrand | Outcome | Outcome Description | $\square$ Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Develope Number Sense | MB.7.N. 1 | 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 . | Divisibility Tests <br> Divisibility Tests $(2,5,10)$ <br> Divisibility Tests (3, 4, 9) <br> Product of Prime Factors <br> Factors <br> Tests of Divisibility 1 <br> Prime or Composite? <br> Greatest Common Factor | Under review |
| Number | Develope Number Sense | MB.7.N. 2 | Demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, technology could be used). | Adding Decimals <br> Add Decimals 2 <br> Subtract Decimals 1 <br> Decimal Complements <br> Subtract Decimals 2 <br> Multiply Decimals: 10, 100, 1000 <br> Divide Decimals: 10, 100, 1000 <br> Divide Decimal by Whole Number <br> Multiply Decimals and Powers of 10 <br> Missing Values: Decimals <br> Adding and Subtracting Decimals <br> Decimal by Whole Number <br> Decimal by Decimal <br> Divide Decimal by Decimal <br> Divide by Powers of 10 <br> Estimate Decimal Sums 1 <br> Estimate Decimals Sums 2 <br> Estimate Decimal Differences 1 <br> Estimate Decimal Differences 2 <br> Rounding Decimals <br> Rounding Decimals 1 <br> Rounding Decimals 2 <br> Estimate Decimal Operations | Grade 7 Decimals |
| Number | Develope Number Sense | MB.7.N. 3 | Solve problems involving percents from $1 \%$ to 100\%. | Percents to Fraction <br> Percentage to Fraction <br> Decimal to Percentage <br> Percents and Decimals <br> Percentage Word Problems <br> Percentage of a Quantity <br> Percent Increase and Decrease <br> Calculating Percentages <br> Percent of a Number | Grade 7 <br> Percentage <br> Basics |

Mathletics

Grade 10 Applied \& Pre-Calculus (20S)

| Strand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Measurement | MB.10I.M. 4 | Develop and apply the primary trigonometric ratios (sine, cosine, tangent) to solve problems that involve right triangles. | $\operatorname{Sin} A$ <br> Cos A <br> Tan A <br> Find Unknown Sides <br> Find Unknown Angles <br> Hypotenuse, Adjacent, Opposite <br> Elevation and Depression <br> Pythagoras' Theorem <br> Pythagorean Triads | Grade 9 Trigonometry |
| Algebra and Number | MB.10I.A. 1 | Demonstrate an understanding of factors of whole numbers by determining, prime factors, greatest common factor, least common multiple, square root and cube root. | Product of Prime Factors Prime or Composite? <br> Greatest Common Factor Least Common Multiple Square Roots Estimate Square Roots Estimating Cube Roots | Grade 7 <br> Whole Numbers |
| Algebra and Number | MB.10I.A. 2 | Demonstrate an understanding of irrational numbers by representing, identifying, simplifying irrational numbers and ordering irrational numbers. | Simplifying Irrational Number Adding and Subtracting Irrational Numbers | Grade 9 <br> Exponents <br> Grade 10 <br> Radicals and Exponents |
| Algebra and Number | MB.10I.A. 3 | Demonstrate an understanding of powers with integral and rational exponents. | Irrational Number to Exponent Form <br> Negative Exponents <br> Fractional Exponents <br> Simplifying with Exponent Laws 1 <br> Simplifying with Exponential Laws 2 | Grade 9 <br> Exponents <br> Grade 10 <br> Radicals and Exponents |
| Algebra and Number | MB.10I.A. 4 | Demonstrate an understanding of the multiplication of polynomial expressions (limited to monomials, binomials, and trinomials), concretely, pictorially, and symbolically. | Simple Substitution <br> Simple Substitution 2 <br> Complex Substitution <br> Expanding Binomial Products <br> Special Binomial Products | Grade 8 Expanding and Factoring |
| Algebra and Number | MB.10I.A. 5 | Demonstrate an understanding of common factors and trinomial factoring, concretely, pictorially, and symbolically. | Factoring Expressions <br> Factoring with Negatives <br> Factoring <br> Factoring with Exponents <br> Highest Common Algebraic Factor <br> Factoring Quadratics 1 <br> Factoring Quadratics 2 <br> Special Binomial Products | Grade 8 <br> Expanding and Factoring Grade 10 Factoring Quadratic Equations |

## Grade 10 Applied \& Pre-Calculus (20S)

| Strand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Relations and Functions | MB.10I.R. 1 | Interpret and explain the relationships among data, graph and contexts. | Graphing from a Table of Values <br> Graphing Parabolas Graphing Cubics | Grade 9 <br> Linear <br> Relationships <br> Grade 10 <br> Straight Lines <br> Parabolas <br> Exponential and Power Graphs simple Nonlinear Graphs |
| Relations and Functions | MB.10I.R. 2 | Demonstrate an understanding of relations and functions. | Scatter Plots | Under review |
| Relations and Functions | MB.10I.R. 3 | Demonstrate an understanding of slope with respect to rise and run, line segments and lines, rate of change, parallel lines and perpendicular lines. | Slope of a Line <br> Gradient <br> Determining a Rule for a Line Horizontal and Vertical Lines Equation from Point and Gradient Equation of a line 2 Equation of a line 3 Which straight line? Are they Parallel? Are they Perpendicular? | Grade 9 <br> Linear <br> Relationships <br> Grade 10 <br> Straight Lines |
| Relations and Functions | MB.10I.R. 4 | Describe and represent linear relations, using words, ordered pairs, tables of values, graphs and equations. | Under review | Grade 9 <br> Linear Relationships Grade 10 Straight Lines |
| Relations and Functions | MB.10I.R. 5 | Determine the characteristics of the graphs of linear relations, including the intercepts, slope, domain and range. | Intercepts | Grade 9 <br> Linear Relationships Grade 10 Straight Lines |
| Relations and Functions | MB.10I.R. 6 | Relate linear relations expressed in slope-intercept form $(y=m x+b)$ general form $(A x+B y+C=O)$ slope-point form $\left(y-y^{l}=m\left(x-x^{l}\right)\right)$ to their graphs. | General Form of a Line Which Straight Line? What Type of Function? | Grade 9 Linear Relationships Grade 10 Straight Lines |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 10 Applied \& Pre-Calculus (20S)

| Strand | Outcome | Outcome Description | $\square$ Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Relations and Functions | MB.1OI.R. 7 | Determine the equation of a linear relation, given a graph, a point and the slope, two points, a point and the equation of a parallel or perpendicular line. | Which Straight Line? <br> Determining a Rule for a Line <br> General Form of a Line <br> Equation of a Line 2 <br> Equation from Two Points <br> Equation of a line 3 <br> Equation from Point and Gradient | Grade 9 <br> Linear Relationships Grade 10 Straight Lines |
| Relations and Functions | MB.10I.R. 8 | Represent a linear function, using function notation. | Function Notation 1 Function Notation 2 | Grade 10 Functions |
| Relations and Functions | MB.10I.R. 9 | Solve problems that involve systems of linear equations in two variables, graphically and algebraically. | Simultaneous Linear Equations <br> Breakeven Point <br> Simultaneous Equations 1 <br> Simultaneous Equations 2 <br> Simultaneous Equations 3 | Grade 9 <br> Equations and Inequalities Grade 10 Quadratic Equations |
| Relations and Functions | MB.10I.R. 10 | Solve problems that involve the distance between two points and the midpoint of a line segment. | Distance Between Two Points Midpoint by Formula Coordinate Methods in Geometry | Grade 9 Coordinate Geometry |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 10 Essential Mathematics (20S)

| Strand | Outcome | Outcome Description | \# Activities | $\pm$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Analysis of Games and Numbers | MB.10E1.A. 1 | Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies. | Under review | Under review |
| Analysis of Games and Numbers | MB.10E2.A. 1 | Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies. | Under review | Under review |
| Personal Finance | MB.10E1.P. 1 | Demonstrate an understanding of calculations for gross pay and net pay earned through income sources including wages, salary, contracts, commissions and piecework. | Wages and Salaries Commission Working Overtime Budgeting | Grade 9 <br> Earning Money |
| Personal Finance | MB.10E1.P. 2 | Solve problems that require the manipulation and application of formulas related to income. | Wages and Salaries Commission Working Overtime Budgeting | Grade 9 <br> Earning Money |
| Measurement | MB.10E1.M. 1 | Demonstrate an understanding of the système international (SI) by describing relationships of the units for length, area, volume, capacity, and mass. | Compare Length Centimeters and Meters Converting cm and mm Grams and Kilograms Milliliters and Liters Kilogram Conversions Grams and Milligrams | Grade 7 Converting Units |
| Measurement | MB.10E1.M. 2 | Demonstrate an understanding of the imperial system by describing the relationships of the units for length, area, volume, capacity, and mass and comparing the American and British imperial units for capacity, and applying strategies to convert between imperial and SI units. | How Long Is That (Customary)? <br> Customary Units of Weight 1 Customary Units of Capacity Customary Units of Length Customary Units of Weight 2 Units of Weight 2 | Grade 7 Converting Units |
| Measurement | MB.1OE1.M. 3 | Solve and verify problems that involve si and imperial linear measurements, including decimal and fractional measurements. | Perimeter: Triangles 2 <br> Perimeter <br> Perimeter of Shapes <br> Perimeter Detectives 1 <br> Perimeter Detectives 2 <br> Perimeter: Squares and <br> Rectangles <br> Perimeter: Triangles <br> Circumference: Circles | Grade 9 <br> Perimeter and Area |
| Measurement | MB.10E1.M. 4 | Solve problems that require the manipulation and application of formulas related to converting measurement. | Real Formulae Rearranging the Equation Changing the Subject | Under review |

## Grade 10 Essential Mathematics (20S)

| Strand | Outcome | Outcome Description | \# Activities | $\pm$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| 2-D Geometry | MB.10E1.G. 1 | Solve problems that involve si and imperial area measurements of regular, composite, and irregular 2-D shapes including decimal and fractional measurements. | Area: Parallelograms <br> Area of Shapes <br> Area: Squares and Rectangles <br> Area: Triangles <br> Area: Right Triangles <br> Converting Units of Area <br> Area: Composite Shapes <br> Area: Circles 1 <br> Area: Circles 2 | Grade 9 <br> Perimeter and Area |
| 2-D Geometry | MB.10E1.G. 2 | Solve problems that require the manipulation and application of formulas related to and area. | Perimeter, Area, Dimension Change | Grade 9 <br> Perimeter and Area <br> Similarity and Congruence |
| Trigonometry | MB.10E2.TG. 1 | Solve problems involving right triangles using the Pythagorean theorem. | Pythagorean Triads Pythagoras' Theorem Hypotenuse of a Right Triangle | Grade 8 Pythagoras's Theorem |
| Trigonometry | MB.10E2.TG. 2 | Demonstrate an understanding of primary trigonometric ratios (sine, cosine, tangent) by applying similarity to right triangles, generalizing patterns from similar right triangles and solving problems. | Hypotenuse, Adjacent, Opposite $\operatorname{Sin} A$ <br> $\operatorname{Cos} A$ <br> Ton A <br> Find Unknown Angles <br> Find Unknown Sides <br> Elevation and Depression | Grade 9 Trigonometry |
| Trigonometry | MB.10E2.TG. 3 | Solve problems that require the manipulation and application of formulas related to the Pythagorean theorem and primary trigonometric ratios. | Find Unknown Angles Find Unknown Sides Elevation and Depression Sign of the Angle | Grade 9 Trigonometry |
| Consumer Decisions | MB.10E2.C. 1 | Solve problems that involve unit pricing and currency exchange, using proportional reasoning. | Best Buy | Under review |
| Transformations | MB.10E2.TF. 1 | Demonstrate an understanding of transformations on a 2-D shape, including translations, rotations, reflections and dilations. | Scale Factor Transformations Flip, Slide, Turn Symmetry or Not? | Grade 9 <br> Similarity and Congruence |
| Angle Construction | MB.10E2.AC. 1 | Demonstrate an understanding of angles, including acute, right, obtuse, straight, and reflex. | Equal Angles Comparing Angles Classifying Angles Measuring Angles Estimating Angles | Grade 7 Angles |
| Angle Construction | MB.10E2.AC. 2 | Solve problems that involve parallel, perpendicular, and transversal lines, and pairs of angles formed between them. | Equal, Complement or Supplement? <br> Angles and Parallel Lines Parallel Lines | Grade 7 <br> Angles |

## Grade 11 Applied Mathematics (30S)

| Strand | Outcome | Outcome Description | \# Activities | eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Measurement | MB.11A.M. 1 | Solve problems that involve the application of rates. | Converting Rates Rates Calculations Rates Word Problems Average Speed Time Taken Distance Travelled | Grade 9 Decimals |
| Measurement | MB.11A.M. 2 | Solve problems that involve scale diagrams, using proportional reasoning. | Scale Factor Floor Plans | Under review |
| Measurement | MB.11.A.M. 3 | Demonstrate an understanding of the relationships among scale factors, areas, surface areas and volumes of similar 2-D shapes and 3-D objects. | Surface Area: Triangular Prisms <br> Surface Area: Cylinders <br> Surface Area: Square Pyramids <br> Surface Area: Rectangular Pyramids <br> Surface Area: Cones <br> Surface Area: Spheres <br> Surface Area: Rectangular Prisms <br> Volume: Rectangular Prisms 1 <br> Volume: Rectangular Prisms 2 <br> Volume: Triangular Prisms <br> Volume: Cylinders <br> Volume: Composite Figures <br> Volume: Spheres <br> Volume: Cones <br> Volume: Pyramids <br> Volume: Prisms <br> Area: Squares and Rectangles <br> Area: Triangles <br> Area: Right Angled Triangles <br> Area: Composite Shapes <br> Area: Circles <br> Converting Units of Area <br> Converting Volume <br> Similar Areas and Volumes | Grade 9 <br> Perimeter and Area <br> Measuring Solids <br> Similarity and Congruence |
| Geometry | MB.11A.G. 1 | Derive proofs that involve the properties of angles and triangles. | Parallel Lines <br> Angles and Parallel Lines <br> Equal, Complement or Supplement? <br> Interior and Exterior Angles <br> Angle Sum of a Triangle <br> Exterior Angles of a Triangle <br> Angle Sum of a Quadrilateral <br> Plane Figure Theorems <br> Area: Parallelograms <br> Area: Quadrilaterals <br> Nets | Grade 7 <br> Angles <br> Grade 9 <br> Polygons and <br> Angles |

Grade 11 Applied Mathematics (30S)

| Strand | Outcome | Outcome Description | $\#$ Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Geometry | MB.11A.G. 2 | Solve problems that involve the properties of angles and triangles. | Interior and Exterior Angles <br> Angle Sum of a Triangle <br> Labelling Angles <br> Classifying Angles <br> Angles in a Revolution <br> Exterior Angles of a Triangle <br> Angle Sum of a Quadrilateral <br> Euler's Formula <br> Parallel Lines <br> Angles and Parallel Lines <br> Equal, Complement or Supplement? | Grade 7 <br> Angles <br> Grade 9 <br> Polygons and Angles |
| Geometry | MB.11A.G. 3 | Solve problems that involve the cosine law and the sine law, including the ambiguous case. | Cosine Rule 1 <br> Cosine Rule 2 <br> Find Unknown Sides <br> Find Unknown Angles <br> Area Problems <br> Sine Rule 1 <br> Sine Rule 2 <br> $\operatorname{Sin} A$ <br> $\operatorname{Cos} A$ <br> Tan A <br> Trigonometry Problems 1 <br> Trigonometry Problems 2 <br> Elevation and Depression <br> Area Rule 1 <br> Area Rule 2 | Grade 9 <br> Trigonometry Grade 10 Non Right Angled Triangles Trigonometric Relationships |
| Logical Reasoning | MB.11A.L. 1 | Analyze and prove conjectures, using inductive and deductive reasoning, to solve problems. | Terms: Arithmetic Progressions Sum: Arithmetic Progressions Terms: Geometric Progressions 1 Terms: Geometric Progressions 2 Sum: Geometric Progressions Divisibility Tests Tests of Divisibility 1 | Grade 11 <br> Sequence and Series: <br> Arithmetic <br> Sequence and Series: <br> Geometric |
| Logical Reasoning | MB.11A.L. 2 | Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies. | Transformations: Coordinate Plane Rotations: Coordinate Plane Dice and Coins Financial Expectation | Under review |
| Statistics | MB.11A.S. 1 | Demonstrate an understanding of normal distribution, including standard deviation z-scores. | Calculating Standard Deviation Interpreting Standard Deviation Mean <br> Mean from Frequency Table <br> Median <br> Median from Frequency <br> Median and Cumulative Frequency <br> Mode from Frequency Table <br> Mode <br> Normal Distribution <br> Calculating z-scores <br> Comparing z-scores <br> Equivalent z-scores | Grade 9 <br> Data <br> Grade 10 <br> Interpreting Data |

## Grade 11 Applied Mathematics (30S)

| Strand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Statistics | MB.11A.S. 2 | Interpret statistical data, using confidence intervals confidence levels margin of error. | Calculating Standard Deviation Interpreting Standard Deviation <br> Mean <br> Mean from Frequency Table <br> Median <br> Median from Frequency <br> Median and Cumulative <br> Frequency <br> Mode from Frequency Table <br> Mode <br> Normal Distribution <br> Calculating z-scores <br> Comparing z-scores <br> Equivalent z-scores | Grade 9 <br> Data <br> Grade 10 <br> Interpreting Data |
| Relations and Functions | MB.11A.R. 1 | Model and solve problems that involve systems of linear inequalities in two variables. | Solving Inequalities 1 <br> Solving Inequalities 2 <br> Solving Inequalities 3 <br> Linear Regions <br> Intersecting Linear Regions | Grade 9 <br> Equations and Inequalities |
| Relations and Functions | MB.11A.R. 2 | Demonstrate an understanding of the characteristics of quadratic functions, including vertex, intercepts, domain and range and axis of symmetry. | Quadratic Equations 1 <br> Quadratic Equations 2 <br> Graphing Parabolas <br> Roots of the Quadratic <br> Factoring Quadratics 1 <br> Factoring Quadratics 2 <br> Checking Solutions <br> Quadratic Formula <br> Vertex of a Parabola <br> Domain and Range <br> The Discriminant <br> Parabolas and Marbles <br> Parabolas and Rectangles <br> Domain | Grade 10 Quadratic Equations Parabolas |
| Relations and Functions | MB.11A.RP.1. | Research and give a presentation on a historical event or an area of interest that involves mathematics. | Data Terms <br> Finding the Average <br> Mean <br> Median <br> Mode <br> Mean from Frequency <br> Mode from Frequency Table <br> Median from Frequency Table <br> Median and Cumulative <br> Frequency <br> Data Extremes and Range | Grade 9 <br> Data <br> Grade 10 Interpreting Data |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 11 Applied Mathematics (30S)

| Strand | Outcome | Outcome Description | 戒 Activities | $\square \mathrm{eBooks}$ |
| :---: | :---: | :---: | :---: | :---: |
| Analysis of Games and Numbers | MB.11E3.A. 1 | Analyze puzzles and games that involve numerical reasoning, using problemsolving strategies. | Under review | Under review |
| Interest and Credit | MB.11E3.I. 1 | Demonstrate an understanding of compound interest. | Compound Interest Compound Interest by Formula | Grade 10 Interest |
| Interest and Credit | MB.11E3.I. 2 | Demonstrate an understanding of credit options, including credit cards and loans. | Comparing Loans Comparing Home Loans Credit Card Repayments | Grade 10 Interest |
| Interest and Credit | MB.11E3.1. 3 | Solve problems that require the manipulation and application of formulas related to simple interest and finance charges. | Effective Interest Rate Simple Interest | Grade 10 Interest |
| 3-D Geometry | MB.11E3.G. 1 | Solve problems that involve SI and imperial units in surface area measurements | Nets <br> Surface Area: Rearrange Formula <br> Surface Area: Square Pyramids <br> Surface Area: Spheres <br> Surface Area: Cones <br> Surface Area: Rectangular Pyramids <br> Surface Area: Rectangular Prisms <br> Surface Area: Cuboids <br> Surface Area: Cylinders <br> Surface Area: Triangular Prisms | Grade 9 Measuring Solids |
| 3-D Geometry | MB.11E3.G. 2 | Solve problems that involve SI and imperial units in volume and capacity measurements. | Volume: Prisms <br> Volume: Pyramids <br> Volume: Cones <br> Volume: Spheres <br> Volume: Rearrange Formula <br> Volume: Rectangular Prisms 1 <br> Converting Volume <br> Volume: Rectangular Prisms 2 <br> Volume: Cylinders <br> Volume: Triangular Prisms <br> Volume: Composite Figures | Grade 9 Measuring Solids |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 11 Applied Mathematics (30S)

| Strand | Outcome | Outcome Description | A Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| 3-D Geometry | MB.11E3.G. 3 | Solve problems that require the manipulation and application of formulas related to volume and capacity surface area. | Volume: Rearrange Formula Surface Area: Rearrange Formula | Grade 9 Measuring Solids |
| Statistics | MB.11E3.S. 1 | Solve problems that involve creating and interpreting graphs, including bar graphs, histograms, line graphs and circle graphs. | Histograms Divided Bar Graphs Bar Graphs 1 Circle Graphs Frequency Histograms Histogram or Polygon? Dot Plots | Grade 10 Interpreting Data |
| Managing Money | MB.11E4.M. 1 | Solve problems that involve personal budgets. | Budgeting <br> Wages and Salaries <br> Commission <br> Best Buy | Grade 9 Earning Money |
| Managing Money | MB.11E4.M. 2 | Demonstrate an understanding of financial institution services used to access and manage finances. | Comparing Loans Comparing Home Loans | Grade 10 Interest |
| Relations and Patterns | MB.11E4.R. 1 | Demonstrate an understanding of slope as rise over run, as rate of change by solving problems. | Gradients for Real Gradient $y=a x$ <br> Slope of a Line | Grade 9 <br> Linear Relationships Coordinate Geometry |
| Relations and Patterns | MB.11E4.R. 2 | Solve problems by applying proportional reasoning and unit analysis. | Best Buy <br> Direct Variation <br> Rates Word Problems <br> Rates | Grade 9 Decimals |
| Relations and Patterns | MB.11E4.R. 3 | Solve problems that require the manipulation and application of formulas related to slope and rate of change. | Slope of a Line <br> Gradient $y=a x$ <br> Which straight line? <br> Equation from Point and Gradient <br> Equation from Two Points | Grade 9 <br> Linear Relationships Coordinate Geometry Grade 10 Straight Lines |
| Relations and Patterns | MB.11E4.R. 4 | Solve problems that involve scale. | Scale Measurement <br> Scale Factor <br> Perimeter, Area, Dimension Change | Under review |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

## Grade 11 Applied Mathematics (30S)

| Strand | Outcome | Outcome Description | $\square$ Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Relations and Patterns | MB.11E4.R. 5 | Demonstrate an understanding of linear relations by recognizing patterns and trends, graphing, creating tables of values, writing equations, interpolating and extrapolating and solving problems. | Table of Values <br> Pattern Rules and Tables <br> Find the Pattern Rule $y=a x$ <br> Which Straight Line? <br> Graphing from a Table of Values <br> Graphing from a Table of Values 2 <br> Scatter plots <br> What Type of Function? <br> Find the Function Rule <br> Reading Values from a Line <br> Determining a Rule for a Line <br> Intercepts | Grade 9 <br> Linear Relationships Coordinate Geometry <br> Grade 10 <br> Straight Lines |
| Trigonometry | MB.11E4.TG. 1 | Solve problems that involve two and three right triangles. | $\operatorname{Sin} A$ <br> $\operatorname{Cos} A$ <br> Ton A <br> Find Unknown sides <br> Find Unknown Angles <br> Elevation and Depression <br> Trigonometry Problems 1 <br> Trigonometry Problems 2 | Grade 9 <br> Trigonometry Grade 10 Trigonometric Relationships |
| Design Modelling | MB.11E4.D. 1 | Model and draw 3-D objects and their views. | Nets | Under review |
| Design Modelling | MB.11E4.D. 2 | Draw and describe exploded views, component parts, and scale diagrams of simple 3-D objects. | Nets | Under review |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 11 Pre-Calculus Mathematics (30S)

| Strand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Algebra and Number | MB.11P.A. 1 | Demonstrate an understanding of the absolute value of real numbers. | Absolute Value Expressions Absolute Value | Under review |
| Algebra and Number | MB.11P.A. 2 | Solve problems that involve operations on radicals and radical expressions with numerical and variable radicands. | Adding and Subtracting Irrational Numbers <br> Expanding Irrational Number <br> Expressions <br> Dividing Expressions <br> Multiplying Irrational Numbers Dividing Irrational Numbers Simplifying Irrational Numbers Square Roots Irrational Number Form to Index Form <br> Rationalizing the Denominator Rationalizing and Binomials Domain and Range | Grade 9 <br> Exponents <br> Grade 10 <br> Radicals and Exponents |
| Algebra and Number | MB.11P.A. 3 | Solve problems that involve radical equations (limited to square roots). | Domain <br> Domain and Range <br> Equations with Square Roots <br> Equations with Cube Roots | Grade 10 Functions |
| Algebra and Number | MB.11P.A. 4 | Determine equivalent forms of rational expressions (limited to numerators and denominators that are monomials, binomials, or trinomials). | Algebraic Fractions 1 Algebraic Fractions 2 Algebraic Fractions 3 | Grade 10 Factoring |
| Algebra and Number | MB.11P.A. 5 | Perform operations on rational expressions (limited to numerators and denominators that are monomials, binomials, or trinomials). | Factoring and Fractions 1 Factoring and Fractions 2 | Grade 10 Factoring |
| Algebra and Number | MB.11P.A. 6 | Solve problems that involve rational equations (limited to numerators and denominators that are monomials, binomials, or trinomials). | Equations with Fractions Equations with Fractions 2 | Grade 10 Factoring |
| Trigonometry | MB.11P.T. 1 | Demonstrate an understanding of angles in standard position [ $\mathrm{O}^{\circ}$ to $360^{\circ}$ ]. | Trig Equations 1 <br> Trig Equations 2 <br> Find Unknown Angles <br> Find Unknown Sides <br> Trig Equations 3 <br> Trigonometric Relationships Which Quadrant? <br> Sign of the Angle <br> Elevation and Depression <br> Trigonometry Problems 1 <br> Trigonometry Problems 2 <br> Area Rule 2 | Grade 9 <br> Trigonometry Grade 10 Trigonometric Relationships |

Mathletics

Grade 11 Pre-Calculus Mathematics (30S)

| Strand | Outcome | Outcome Description | \# Activities | $\pm$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Trigonometry | MB.11P.T. 2 | Solve problems, using the three primary trigonometric ratios (sine, cosine, and tangent) for angles from $0^{\circ}$ to $360^{\circ}$ in standard position. | Distance Between Two Points <br> Pythagorean Theorem <br> Pythagorean Triads <br> Sign of the Angle <br> Trig Equations 1 <br> Trig Equations 2 <br> Exact Trigonometric Ratios | Grade 9 <br> Coordinate Geometry <br> Trigonometry <br> Grade 10 <br> Trigonometric <br> Relationships |
| Trigonometry | MB.11P.T. 3 | Solve problems, using the cosine law and sine law, including the ambiguous case. | Area Rule 1 Area Problems <br> Sine rule 1 <br> Sine rule 2 <br> Cosine rule 1 <br> Cosine rule 2 | Grade 10 <br> Non Right Angled <br> Triangles |
| Relations and Functions | MB.11P.R. 1 | Factor polynomial expressions of the form $\begin{aligned} & a x^{2}+b x+c, a \neq 0 \\ & a^{2} x^{2}-b^{2} y^{2}, a \neq 0, b \neq 0 \\ & a(f(x))^{2}+b(f(x))+c, a \neq 0 \\ & a^{2}(f(x))^{2}-b^{2}(g(y))^{2}, a \neq 0, b \neq 0 \end{aligned}$ <br> where $a, b$ and $c$ are rational numbers. | Highest Common Algebraic Factor <br> Factoring <br> Factoring Expressions <br> Factoring Quadratics 1 <br> Factoring Quadratics 2 <br> Special Binomial Products <br> Equations Reducible to Quadratics | Grade 8 <br> Expanding and Factoring Grade 10 Quadratic Equations Factoring |
| Relations and Functions | MB.11P.R. 2 | Graph and analyze absolute value functions (limited to linear and quadratic functions) to solve problems. | Absolute Value Graphs | Under review |
| Relations and Functions | MB.11P.R. 3 | Analyze quadratic functions of the form $y=a(x-p)^{2}+q$ and determine the vertex, domain and range, direction of opening, axis of symmetry, $x$ - and $y$-intercepts. | Completing the square Completing the Square 2 Graphing Parabolas Vertex of a Parabola Quadratic Equations 1 <br> Quadratic Equations 2 | Grade 10 <br> Quadratic Equations Parabolas |
| Relations and Functions | MB.11P.R. 4 | Analyze quadratic functions of the form $y=a x^{2}+b x+c$ to identify characteristics of the corresponding graph, including vertex, domain and range, direction of opening, axis of symmetry, $x$ - and $y$-intercepts. | Graphing Parabolas | Grade 10 <br> Quadratic Equations Parabolas |
| Relations and Functions | MB.11P.R. 5 | Solve problems that involve quadratic equations. | Roots of the Quadratic Quadratic Equations 1 Quadratic Equations 2 Quadratic Formula The Discriminant | Grade 10 <br> Quadratic Equations Parabolas |

Mathletics

## Grade 11 Pre-Calculus Mathematics (30S)

| Strand | Outcome | Outcome Description | Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Relations and Functions | MB.11P.R. 6 | Solve, algebraically and graphically, problems that involve systems of linear-quadratic and quadratic-quadratic equations in two variables. | Solve Systems by Graphing <br> Simultaneous Equations 1 <br> Simultaneous Equations 2 <br> Simultaneous Equations 3 <br> Simultaneous Linear Equations | Grade 10 <br> Quadratic Equations Parabolas |
| Relations and Functions | MB.11P.R. 7 | Solve problems that involve linear and quadratic inequalities in two variables. | Linear Regions Non Linear Regions Intersecting Linear Regions Intersecting Non Linear Regions Quadratic Inequalities Graphing Inequalities 2 | Under review |
| Relations and Functions | MB.11P.R. 8 | Solve problems that involve quadratic inequalities in one variable. | Quadratic Inequalities | Under review |
| Relations and Functions | MB.11P.R. 9 | Analyze arithmetic sequences and series to solve problems. | Terms: Arithmetic Progressions Sum: Arithmetic Progressions | Grade 11 <br> Sequence and Series: <br> Arithmetic <br> Sequence and Series: <br> Geometric |
| Relations and Functions | MB.11P.R. 10 | Analyze geometric sequences and series to solve problems. | Terms: Geometric Progressions 1 Terms: Geometric Progressions 2 Sum: Geometric Progressions Limiting Sum | Grade 11 <br> Sequence and Series: Arithmetic Sequence and Series: Geometric |
| Relations and Functions | MB.11P.R. 11 | Graph and analyze reciprocal functions (limited to the reciprocal of linear and quadratic functions). | Under review | Under review |

Mathletics

Grade 12 Applied Mathematics (40S)

| Strand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Financial Maths | MB.12A.FM. 1 | Solve problems that involve compound interest in financial decision making. | Simple Interest Compound Interest Compound Interest by Formula Depreciation <br> Declining Balance Depreciation Future Value of Investments 1 Future Value of Investments 2 | Grade 10 Interest Depreciation |
| Financial Maths | MB.12A.FM. 2 | Analyze costs and benefits of renting, leasing, and buying. | Depreciation <br> Declining Balance Depreciation | Grade 10 Depreciation |
| Financial Maths | MB.12A.FM. 3 | Analyze an investment portfolio in terms of interest rate, rate of return and total return | Simple Interest Compound Interest Compound Interest by Formula Depreciation <br> Declining Balance Depreciation Future Value of Investments 1 Future Value of Investments 2 | Grade 10 Interest Depreciation |
| Logical Reasoning | MB.12A.L. 1 | Analyze puzzles and games that involve numerical and logical reasoning, using problem-solving strategies. | Financial Expectation | Under review |
| Logical Reasoning | MB.12A.L. 2 | Solve problems that involve the application of set theory. | Venn Diagrams <br> Tree Diagrams <br> Dice and Coins <br> Probability Tables <br> Two-way Table Probability | Grade 9 Probability |
| Logical Reasoning | MB.12A.L. 3 | Solve problems that involve conditional statements. | Venn Diagrams <br> Tree Diagrams <br> Dice and Coins <br> Probability Tables <br> Two-way Table Probability | Grade 9 Probability |
| Probability | MB.12A.P. 1 | Interpret and assess the validity of odds and probability statements. | Simple Probability <br> Complementary Events <br> Probability With Replacement <br> Probability Without Replacement <br> Probability Tables <br> Two-way Table Probability <br> Relative Frequency <br> Financial Expectation <br> Venn Diagrams <br> Tree Diagrams | Grade 9 Probability |

## Manitoba Curriculum <br> Alignment with Mathletics

Mathletics

Grade 12 Applied Mathematics (40S)

| Strand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Probability | MB.12A.P. 2 | Solve problems that involve the probability of mutually exclusive and non-mutually exclusive events. | Complementary Events Venn Diagrams | Grade 9 Probability |
| Probability | MB.12A.P. 3 | Solve problems that involve the probability of independent and dependent events. | Probability With Replacement Probability Without Replacement | Grade 9 Probability |
| Probability | MB.12A.P. 4 | Solve problems that involve the fundamental counting principle. | Counting Principle Counting Techniques 1 Counting Techniques 2 | Under review |
| Probability | MB.12A.P. 5 | Solve problems that involve permutations. | Permutations and Probability | Under review |
| Probability | MB.12A.P. 6 | Solve problems that involve combinations. | Combinations and Probability | Under review |
| Relations and Functions | MB.12A.R. 1 | Represent data, using polynomial functions (of degree $\leq 3$ ), to solve problems. | Graphing from a Table of Values Graphing Parabolas Graphing Cubics | Grade 10 <br> Sketching <br> Polynomials <br> Simple Nonlinear <br> Graphs <br> Exponential and Power Graphs |
| Relations and Functions | MB.12A.R. 2 | Represent data, using exponential and logarithmic functions, to solve problems. | Graphing Exponentials Exponential or Log Graph? Exponential Growth and Decay | Grade 10 <br> Simple Nonlinear Graphs Exponential and Power Graphs |
| Relations and Functions | MB.12A.R. 3 | Represent data, using sinusoidal functions, to solve problems. | Sine and Cosine Curves Period and Amplitude | Under review |
| Mathematics research Project | MB.12A.RP. 1 | Research and give a presentation on a current event or an area of interest that involves mathematics. | Data Terms <br> Finding the Average <br> Mean <br> Median <br> Mode <br> Mean from Frequency Table <br> Mode from Frequency Table <br> Median from Frequency <br> Median and Cumulative Frequency <br> Data Extremes and Range | Grade 9 Data |

## Manitoba Curriculum

## Grade 12 Applied Mathematics (40S)

| Strand | Outcome | Outcome Description | \# Activities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Design and Measurement | MB.12A.D. 1 | Analyze objects, shapes, and processes to solve cost and design problems. | Perimeter: Composite Shapes <br> Area: Composite Shapes <br> Area: Circles 1 <br> Area: Sectors (Degrees) <br> Area: Annulus <br> Volume: Prisms <br> Volume: Cylinders <br> Volume: Pyramids <br> Volume: Cones <br> Volume: Spheres <br> Volume: Composite Figures <br> Volume: Rearrange Formula <br> Ratio <br> Unitary Method <br> Ratio and Proportion <br> Dividing a Quantity in a Ratio <br> Rates Word Problems <br> Elevations <br> Field Diagrams <br> Floor Plans <br> House Plan Symbols <br> Offset Diagrams | Grade 9 <br> Perimeter and Area <br> Measuring Solids Decimals |

## Grade 12 Essential Mathematics (40S)

| Strand | Outcome | Outcome Description | EActivities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Analysis of Games and Numbers | MB.12E5.A. 1 | Analyze puzzles and games that involve logical reasoning, using problem-solving strategies. | Dice and Coins Financial Expectation | Grade 9 Probability |
| Vehicle Finance | MB.12E5.V. 1 | Solve problems that involve the acquisition, operation, and maintenance of a vehicle, when <br> - buying <br> - leasing <br> - leasing to buy. | Under review | Under review |
| Statistics | MB.12E5.S. 1 | Solve problems that involve measures of central tendency, including <br> - mean <br> - median <br> - mode <br> - weighted mean <br> - trimmed mean. | Mean <br> Median <br> Mode <br> Mean from Frequency Table <br> Median from Frequency <br> Mode from Frequency Table <br> Median and Cumulative Frequency <br> Data Extremes and Range <br> Box-and-Whisker Plots 1 <br> Box-and-Whisker Plots 2 | Grade 9 <br> Data <br> Grade 10 <br> Interpreting Data |
| Statistics | MB.12E5.S. 2 | Analyze and describe percentiles. | Box-and-Whisker Plots 1 <br> Box-and-Whisker Plots 2 | Grade 10 Interpreting Data |
| Precision Measurement | MB.12E5.P. 1 | Demonstrate an understanding of the limitations of measuring instruments, including <br> - precision <br> - accuracy <br> - uncertainty <br> - tolerance. | Error in Measurement Percentage Error | Under review |
| Career Life | MB.12E5.C. 1 | Create a plan for the future including possible career choices and their requirements. | Wages and Salaries <br> Commission <br> Working Overtime <br> Special Allowances <br> Bonuses and Leave Loading <br> Piecework and Royalties <br> Calculating Income Tax <br> Deductions and Tax Instalments <br> Reading from a Bill <br> Calculating Dividends <br> Credit Card Repayments <br> Shares <br> Budgeting <br> Purchase Options <br> Net Pay <br> Deductions and Net Pay | Grade 9 Earning Money |

## Manitoba Curriculum

## Grade 12 Essential Mathematics (40S)

| Strand | Outcome | Outcome Description | PActivities | $\square$ eBooks |
| :---: | :---: | :---: | :---: | :---: |
| Analysis of Games and Numbers | MB.12E6.A. 1 | Analyze puzzles and games that involve logical reasoning, using problem-solving strategies. | Dice and Coins Financial Expectation | Under review |
| Home Finance | MB.12E6.H. 1 | Solve problems involving the purchase and maintenance of a house. | Comparing Loans Comparing Home Loans | Grade 10 Interest |
| Geometry and Trigonometry | MB.12E6.G. 1 | Solve problems by using the sine law and cosine law, excluding the ambiguous case. | Sine Rule 1 Sine Rule 2 Cosine Rule 1 Cosine Rule 2 | Grade 10 <br> Non Right Angle Triangles |
| Geometry and Trigonometry | MB.12E6.G. 2 | Solve problems that involve <br> - triangles <br> - quadrilaterals <br> - regular polygons. | Plane Figure Theorems <br> Angle Sum of a Triangle <br> Exterior Angles of a Triangle <br> Area: Triangles <br> Area: Squares and Rectangles <br> Area: Right Triangles <br> Area: Quadrilaterals <br> Area: Parallelograms <br> Area: Composite Shapes <br> Area: Compound Figures <br> Angle Sum of a Quadrilateral <br> Interior and Exterior Angles | Grade 9 <br> Perimeter and Area <br> Polygons and Angles |
| Business Finance | MB.12E6.B. 1 | Critique the viability of small business options by considering <br> - expenses <br> - sales <br> - profit or loss. | Breakeven Point Linear Modelling | Grade 9 <br> Linear <br> Relationships |
| Business Finance | MB.12E6.B. 2 | Demonstrate an awareness of the government taxation forms and procedures involved in owning a business. | Breakeven Point Linear Modelling | Grade 9 Linear Relationships |
| Probability | MB.12E6.B. 1 | Analyze and interpret problems that involve probability. | Probability Scale Simple Probability Complementary Events Dice and Coins Probability Tables Two-way Table Probability Relative Frequency Financial Expectation Venn Diagrams Tree Diagrams | Grade 9 Probability |

Mathletics

Grade 12 Pre-Calculus Mathematics (40S)

| Strand | Outcome | Outcome Description | eBooks |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Trigonometry | MB.P.T.1 | Demonstrate an understanding <br> of angles in standard position, <br> expressed in degrees and radians. | Length of an Arc <br> Converting Radians and Degrees | Under review |
| Trigonometry | MB.P.T.2 | Develop and apply the equation of <br> the unit circle. | Graphing Circles | Grade 10 |
| Circle Graphs |  |  |  |  |

## Manitoba Curriculum

## Grade 12 Pre-Calculus Mathematics (40S)

| Strand | Outcome | Outcome Description | eBooks |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Relations and <br> Functions | MB.P.R.4 | Apply translations, compressions <br> and stretches to the graphs and <br> equations of functions. | Under review |  |
| Relations and <br> Functions | MB.P.R.5 | Demonstrate an understanding <br> of the effects of reflections on <br> the graphs of functions and <br> their related equations, including <br> reflections through the $x$-axis, <br> y-axis and line y $x$. | Under review | Grade 10 |
| Functions |  |  |  |  |

## Manitoba Curriculum <br> Alignment with Mathletics

## Grade 12 Pre-Calculus Mathematics (40S)

| Strand | Outcome | Outcome Description | Activities |  | eBooks |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Permutations, <br> Combinations <br> and Binomial <br> Theorem | MB.P.P.1 | Apply the fundamental counting <br> principle to solve problems. | Counting Techniques 1 <br> Counting Techniques 2 | Under review |  |
| Permutations, <br> Combinations <br> and Binomial <br> Theorem | MB.P.P.2 | Determine the number of <br> permutations of $n$ elements taken $r$ <br> at a time to solve problems. | Under review |  |  |
| Permutations, <br> Combinations <br> and Binomial <br> Theorem | MB.P.P.3 | Determine the number of <br> combinations of $n$ different elements <br> taken $r$ at a time to solve problems. | Under review | Under review |  |
| Permutations, <br> Combinations <br> and Binomial <br> Theorem | MB.P.P.4 | Expand powers of a binomial in <br> a variety of ways, including using <br> the binomial theorem (restricted <br> to exponents that are natural <br> numbers). | Pascal's Triangle, Expansion <br> Tree Diagrams | Under review |  |

## Mathletics

For more information about Mathletics, contact our friendly team.

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