

Mathletics

Quebec Program of Studies

Understanding Practice and Fluency (UPF)

Grades 3 – 6
November, 2021

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Grade 3

1 Arithmetic

1.1 Understanding and writing numbers

Outcome	Quests	Content
A. Natural numbers less than 100 000 1. Counts or recites counting rhymes involving natural numbers b. counts forward or backward c. skip counts (e.g. by twos)	Count using natural numbers	Counting by 1s to 1000
		Counting by 2s to 1000
		Counting by 3s to 1000
		Counting by 4s to 1000
		Counting by 5s to 1000
		Counting by 10s to 1000
A. Natural numbers less than 100 000 2. Counts collections (using objects or drawings) c. counts a collection by grouping or regrouping d. counts a pre-grouped collection	Counting collections	Counting collections of 10s & 100s
A. Natural numbers less than 100 000 3. Reads and writes any natural number	Read & write numbers to 10 000	Reading & writing numbers to 10 000
A. Natural numbers less than 100 000 4. Represents natural numbers in different ways or associates a number with a set of objects or drawings b. emphasis on exchanging apparent, non-accessible groupings, using structured materials (e.g. base ten blocks, number tables) c. emphasis on place value in non-apparent, non-accessible groupings, using materials for which groupings are symbolic	Place value of numbers to 10 000	Place value of numbers to 10 000
A. Natural numbers less than 100 000 5. Composes and decomposes a natural number in a variety of ways (e.g. $123 = 100 + 23$, $123 = 100 +$	Compose & decompose numbers to 10 000	Composing & decomposing numbers to 10 000
		Non-standard partitioning of numbers to 10 000

20 + 3, 123 = 50 + 50 + 20 + 3, 123 = 2 × 50 + 30 - 7, 123 = 2 × 60 + 3)		
A. Natural numbers less than 100 000 6. Identifies equivalent expressions (e.g. 52 = 40 + 12, 25 + 27 = 40 + 12, 52 = 104 ÷ 2)	Recognize equivalent number sentences	Recognizing equivalent number sentences
A. Natural numbers less than 100 000 8. Arranges natural numbers in increasing or decreasing order	Order numbers to 10 000	Ordering numbers to 10 000
A. Natural numbers less than 100 000 12. Classifies natural numbers in various ways, based on their properties (e.g. even numbers, composite numbers)	Investigate odd & even numbers	Investigating odd & even numbers
A. Natural numbers less than 100 000 13. Approximates a collection, using objects or drawings (e.g. estimate, round up/down to a given value)	Round numbers to 10 000	Rounding numbers to 10 000
B. Fractions (using objects or drawings) 2. Represents a fraction in a variety of ways, based on a whole or a collection of objects	Represent fractions	Introducing thirds
		Introducing fifths
		Introducing tenths
		Introducing sixths
		Introducing eighths
B. Fractions (using objects or drawings) 3. Matches a fraction to part of a whole (congruent or equivalent parts) or part of a group of objects, and vice versa	Match fractions to part of a whole	Equivalence in fractions (halves & fourths)
		Equivalence in fractions (thirds & sixths)
B. Fractions (using objects or drawings) 4. Identifies the different meanings of fractions (sharing, division, ratio)	Understand meaning of fractions	Fair share problems with fractions
B. Fractions (using objects or drawings) 5. Distinguishes a numerator from a denominator	Understand fractions	Introducing the terms numerator & denominator
B. Fractions (using objects or drawings) 7. Compares a fraction to 0, ½ or 1	Compare fractions	Identifying & comparing fractions
B. Fractions (using objects or drawings) 8. Verifies whether two fractions are equivalent	Equivalence in fractions	Equivalence in fractions

C. Decimals up to hundredths 1. Represents decimals in a variety of ways (using objects or drawings)	Represent decimals in different ways	Representing tenths using models
C. Decimals up to hundredths 3. Reads and writes numbers written in decimal notation	Read & write decimal numbers	Introducing decimal notation
		Reading & writing decimals
C. Decimals up to hundredths 8. Compares two decimals	Compare decimals	Comparing & ordering decimal tenths
C. Decimals up to hundredths 9. Approximates (e.g. estimates, rounds to a given value, truncates decimal places)	Approximate decimals	Rounding decimal tenths
C. Decimals up to hundredths 11. Matches a. a fraction to its decimal	Match fractions to decimals	Connecting decimal fractions to common fractions

1.2 Meaning of operations involving numbers

A. Natural number less than 100 000 2. Uses objects, diagrams or equations to represent a situation and conversely, describes a situation represented by objects, diagrams or equations (use of different meanings of addition and subtraction) a. transformation (adding, taking away), uniting, comparing b. composition of transformations positive, negative	Add & subtract word problems to 10 000	Solving addition & subtraction word problems
A. Natural number less than 100 000 3. Uses object, diagrams or equations to represent a situation and conversely, describes a situation represented by objects, diagrams or equations (use of different means of multiplication and division) b. rectangular arrays, repeated addition, Cartesian product, area, volume, repeated subtraction, sharing, number of times x goes into y, and comparisons (using objects, diagrams or equations)	Use multiplication & repeated addition	Using repeated addition to multiply
		Connecting multiplication & repeated addition

A. Natural number less than 100 000 4. Establishes equality relations between numerical expressions	Equality in numerical expressions	Comparing numbers using inequality symbols
A. Natural number less than 100 000 5. Determines numerical equivalences using relationships between b. operations (the four operations), the commutative property of addition and multiplication and the associative property	Relationships between operations	Linking addition & subtraction
		The associative property of addition
		The commutative property of multiplication
		Linking the 4 operations

1.3 Operations involving numbers

Outcome	Quests	Content
A. Natural numbers 1. Approximates the result of a. an addition or subtraction involving natural numbers b. any of the four operations involving natural numbers	Estimate the result of calculations	Estimating addition of 3-digit numbers
		Estimating subtraction of 3-digit numbers
A. Natural numbers 2. Builds a repertoire of memorized addition and subtraction facts b. Develops various strategies that promote mastery of number facts and relates them to the properties of addition c. Masters all addition facts ($0 + 0$ to $10 + 10$) and the corresponding subtraction facts	Add & subtract within 20	Addition & subtraction facts within 20
A. Natural numbers 3. Develops processes for mental computation a. Uses his/her own processes to determine the sum or difference of two natural numbers b. Uses his/her own processes to determine the product or quotient of two natural numbers	Add/subtract using 2-digit numbers	Addition: bridging to ten using models
		Addition: rounding & compensating
		Subtraction: bridging to ten using models
		Subtraction: rounding & compensating
		Add/subtract: bridging to ten using models
		Add/subtract: rounding & compensating

<p>A. Natural numbers</p> <p>3. Develops processes for mental computation</p> <p>a. Uses his/her own processes to determine the sum or difference of two natural numbers</p> <p>b. Uses his/her own processes to determine the product or quotient of two natural numbers</p>	<p>Add/subtract using 3-digit numbers</p>	Adding using a number line
		Adding using place value
		Adding using a split strategy
		Adding using rounding & compensating
		Subtracting using a number line
		Subtracting using place value
		Subtracting using rounding & compensating
		Mixed addition strategies
		Mixed subtraction strategies
Mixed addition & subtraction strategies		
<p>A. Natural numbers</p> <p>4. Develops processes for written computation (addition and subtraction)</p> <p>b. Uses conventional processes to determine the sum of two natural numbers of up to four digits</p> <p>c. Uses conventional processes to determine the difference between two natural numbers of up to four digits whose result is greater than 0</p>	<p>Add/subtract using written strategies</p>	Addition up to two 2-digit numbers
		Subtraction up to 3-digit numbers
<p>A. Natural numbers</p> <p>5. Determines the missing term in an equation (relationships between operations)</p>	<p>Balance number sentences</p>	<p>Balancing number sentences</p>
<p>A. Natural numbers</p> <p>6. Builds a repertoire of memorized multiplication and division facts</p> <p>a. Builds a memory of multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts, using objects, drawings, charts and tables</p> <p>b. Develops various strategies that promote mastery of number facts and relate them to the properties of multiplication</p> <p>c. Masters all multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts</p>	<p>Multiplication facts to 10 x 10</p>	Exploring multiplication by 2
		Exploring multiplication by 5
		Exploring multiplication by 10
<p>A. Natural numbers</p> <p>6. Builds a repertoire of memorized multiplication and division facts</p> <p>a. Builds a memory of multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts, using</p>	<p>Division facts within 10</p>	Exploring division by 2
		Exploring division by 5
		Exploring division by 10

<p>objects, drawings, charts and tables</p> <p>b. Develops various strategies that promote mastery of number facts and relate them to the properties of multiplication</p> <p>c. Masters all multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts</p>		
<p>A. Natural numbers</p> <p>6. Builds a repertoire of memorized multiplication and division facts</p> <p>a. Builds a memory of multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts, using objects, drawings, charts and tables</p> <p>b. Develops various strategies that promote mastery of number facts and relate them to the properties of multiplication</p> <p>c. Masters all multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts</p>	<p>Mixed multiplication & division practice</p>	<p>Multiplying & dividing by 2s, 5s & 10s</p>
<p>C. Decimals</p> <p>2. Develops processes for mental computation</p> <p>a. adds and subtracts decimals</p>	<p>Add & subtract decimals</p>	<p>Adding decimals to tenths</p> <p>Subtracting decimals to tenths</p> <p>Adding & subtracting decimal word problems</p>

2 Geometry

Outcome	Quests	Content
B. Solids 1. Compares objects or parts of objects in the environment with solids	Compare objects with solids	Comparing solid objects
B. Solids 3. Identifies the main solids	Identify solids	Sorting solid objects
B. Solids 4. Identifies and represents the different faces of a prism or pyramid	Identify prisms & pyramids	Identifying properties of prisms & pyramids
B. Solids 6. Classifies prisms and pyramids	Classify prisms & pyramids	Classifying & sorting prisms & pyramids
B. Solids 8. Matches the net of a. a prism to the corresponding prism and vice versa b. a pyramid to the corresponding pyramid and vice versa	Match nets of prisms & pyramids	Matching nets to prisms
C. Plane figures 2. Identifies plane figures (square, rectangle, triangle, rhombus and circle)	Identify & sort plane figures	Identifying regular plane figures
		Identifying regular & irregular plane figures
		Sorting plane figures
C. Plane figures 5. Identifies and constructs parallel lines and perpendicular lines	Identify parallel & perpendicular lines	Identifying parallel lines
C. Plane figures 6. Describes quadrilaterals	Describe quadrilaterals	Describing quadrilaterals
C. Plane figures 7. Classifies quadrilaterals	Classify quadrilaterals	Sorting & naming quadrilaterals
D. Frieze patterns and tessellations 1. Identifies congruent figures	Identify congruent figures	Exploring congruency in plane shapes
D. Frieze patterns and tessellations 2. Observes and produces patterns using geometric figures	Patterns with geometric figures	Creating & describing repeating patterns
		Exploring visual patterns
		Exploring simple patterns with transformations
		Manipulating repeating patterns
D. Frieze patterns and tessellations 3. Observes and produces frieze patterns and tessellations a. using reflections	Reflections & symmetry	Introducing reflections
		Recognizing symmetry of shapes

3 Measurement

Outcome	Quests	Content
A. Lengths 4. Estimates and measures the dimensions of an object using conventional units b. metre, decimetre, centimetre and millimetre	Estimate & measure length	Estimating & measuring to the nearest cm
		Measuring in m & cm
		Measuring in half & quarter m/cm
		Ordering & comparing lengths: m & cm
A. Lengths 5. Establishes relationships between units of measure for length a. metre, decimetre, centimetre and millimetre	Relationships between units of length	Converting between m & cm
		Selecting appropriate units of measure: m & cm
B. Surface areas 1. Estimates and measures surface area a. using unconventional units	Estimate & measure surface area	Using unconventional units to measure area
		Comparing & ordering areas
		Measuring & estimating areas using a square unit
C. Volumes 1. Estimates and measures volumes a. using unconventional units	Estimate & measure volume	Comparing & ordering volumes
D. Angles 1. Compares angles	Compare angles	Comparing angles informally
E. Capacities 1. Estimates and measures capacity using unconventional units	Compare & order volumes	Comparing & ordering volumes through displacement
		Estimating, comparing & measuring: cm ² blocks
E. Capacities 2. Estimates and measures capacity using conventional units	Estimate & measure capacity	Measuring capacity: litres
		Measuring capacity: millilitres
		Estimating, comparing & measuring: litres
		Selecting appropriate unit of measure: L & mL
F. Masses 1. Estimates and measures mass using unconventional units	Mass: unconventional units	Comparing & ordering mass: unconventional units
F. Masses 2. Estimates and measures mass using conventional units	Mass: conventional units	Measuring mass: kg
G. Time 1. Estimates and measures time using conventional units	Estimate & measure time	Choosing appropriate units to measure time
		Telling time to five minutes (analogue)
		Telling time to five minutes (digital)

<p>G. Time</p> <p>2. Establishes relationships between units of measure</p>	<p>Relationship between units of time</p>	<p>Recalling relationships between units of time</p>
<p>H. Temperature</p> <p>1. Estimates and measures temperature using conventional units</p>	<p>Estimate & measure temperature</p>	<p>Comparing & ordering time: seconds & minutes</p> <p>Introducing thermometers</p>

4 Statistics

Outcome	Quests	Content
1. Formulates questions for a survey (based on age-appropriate topics, students' language level, etc)	Formulate questions in data	Posing questions for a survey
2. Collects, describes and organizes data (classifies or categorizes) using tables	Collect, describe & organize data	Collecting, describing & organizing data
3. Interprets data using b. a table, a bar graph, a pictograph and a broken-line graph	Interpret data	Using a table
		Using a pictograph
		Using a bar graph
		Constructing a bar graph
		Introducing the statistical investigation process
Conducting a simple statistical investigation		

5 Probability

Outcome	Quests	Content
1. When applicable, recognizes variability in possible outcomes (uncertainty)	Use the language of probability	Using the language of probability
2. When applicable, recognizes equiprobability	Recognize equiprobability	Recognizing equiprobability
		Conducting chance experiments
7. Uses tables or diagrams to collect and display the outcomes of an experiment	Display outcomes in data	Using a table to collect & display outcomes

Grade 4

1 Arithmetic

1.1 Understanding and writing numbers

Outcome	Quests	Content
A. Natural numbers less than 100 000 1. Counts or recites counting rhymes involving natural numbers b. counts forward or backward c. skip counts (e.g. by twos)	Count natural numbers	Counting by 50s to 10 000
		Counting by 25s to 10 000
		Counting by 20s to 10 000
		Counting by 1000s to 10 000
A. Natural numbers less than 100 000 3. Reads and writes any natural number	Read & write numbers to 100 000	Reading & writing numbers to 100 000
A. Natural numbers less than 100 000 4. Represents natural numbers in different ways or associates a number with a set of objects or drawings b. emphasis on exchanging apparent, non-accessible groupings, using structured materials (e.g. base ten blocks, number tables) c. emphasis on place value in non-apparent, non-accessible groupings, using materials for which groupings are symbolic	Represent numbers to 100 000	Place value of numbers to 100 000
A. Natural numbers less than 100 000 5. Composes and decomposes a natural number in a variety of ways (e.g. $123 = 100 + 23$, $123 = 100 + 20 + 3$, $123 = 50 + 50 + 20 + 3$, $123 = 2 \times 50 + 30 - 7$, $123 = 2 \times 60 + 3$)	Compose & decompose numbers to 100 000	Composing & decomposing numbers to 100 000
A. Natural numbers less than 100 000 6. Identifies equivalent expressions (e.g. $52 = 40 + 12$, $25 + 27 = 40 + 12$, $52 = 104 \div 2$)	Identify equivalent expressions	Identifying equivalent expressions

A. Natural numbers less than 100 000 7. Compares natural numbers	Compare numbers to 100 000	Comparing numbers to 100 000
A. Natural numbers less than 100 000 8. Arranges natural numbers in increasing or decreasing order	Order numbers to 100 000	Ordering numbers to 100 000
A. Natural numbers less than 100 000 12. Classifies natural numbers in various ways, based on their properties (e.g. even numbers, composite numbers)	Understand odd & even numbers	Understanding odd & even numbers
A. Natural numbers less than 100 000 13. Approximates a collection, using objects or drawings (e.g. estimate, round up/down to a given value)	Round numbers to 100 000	Rounding numbers to 100 000
B. Fractions (using objects or drawings) 2. Represents a fraction in a variety of ways, based on a whole or a collection of objects	Represent fractions	Finding halves, fourths & eighths
		Counting in tenths
B. Fractions (using objects or drawings) 3. Matches a fraction to part of a whole (congruent or equivalent parts) or part of a group of objects, and vice versa	Match fractions	Finding a unit fraction of a quantity
B. Fractions (using objects or drawings) 7. Compares a fraction to 0, $\frac{1}{2}$ or 1	Compare fractions	Comparing fractions using benchmarks
B. Fractions (using objects or drawings) 8. Verifies whether two fractions are equivalent	Equivalence of fractions	Investigating equivalent fractions
B. Fractions (using objects or drawings) 10. Orders fractions with the same denominator	Order fractions	Ordering tenths
C. Decimals up to hundredths 1. Represents decimals in a variety of ways (using objects or drawings)	Represent decimals	Representing decimals to hundredths
C. Decimals up to hundredths 3. Reads and writes numbers written in decimal notation	Read & write decimals	Reading & writing hundredths
C. Decimals up to hundredths 5. Composes and decomposes a decimal written in decimal notation	Compose & decompose decimals	Composing & decomposing decimals to hundredths

C. Decimals up to hundredths 8. Compares two decimals	Compare decimals	Comparing decimals
C. Decimals up to hundredths 9. Approximates (e.g. estimates, rounds to a given value, truncates decimal places)	Approximate decimals	Rounding decimal hundredths
C. Decimals up to hundredths 11. Matches a. a fraction to its decimal	Match fractions to decimals	Connecting decimals & fractions
D. Integers 1. Represents integers in a variety of ways (using objects or drawings) (e.g. tokens in two different colours, number line, thermometer, football field, elevator, hot air balloon)	Represent integers in different ways	Representing numbers in different ways

1.2 Meaning of operations involving numbers

Outcome	Quests	Content
A. Natural number less than 100 000 1. Determines the operation(s) to perform in a given situation	Determine operations to use	One-step word problems
A. Natural number less than 100 000 2. Uses objects, diagrams or equations to represent a situation and conversely, describes a situation represented by objects, diagrams or equations (use of different meanings of addition and subtraction) a. transformation (adding, taking away), uniting, comparing b. composition of transformations positive, negative	Solve add & subtract word problems	Solving addition & subtraction problems
A. Natural number less than 100 000 3. Uses objects, diagrams or equations to represent a situation and conversely, describes a situation represented by objects, diagrams or equations (use of different means of multiplication and division) b. rectangular arrays, repeated addition, Cartesian product, area, volume, repeated subtraction, sharing, number of times x goes	Solve multiply & divide word problems	Solving multiplication & division problems

into y, and comparisons (using objects, diagrams or equations)		
A. Natural number less than 100 000 5. Determines numerical equivalences using relationships between b. operations (the four operations), the commutative property of addition and multiplication and the associative property	Equality in operations	Equality in addition & subtraction
		Equality in multiplication & division

1.3 Operations involving numbers

Outcome	Quests	Content	
A. Natural numbers 1. Approximates the result of a. an addition or subtraction involving natural numbers b. any of the four operations involving natural numbers	Estimate results of calculations	Estimating additions & subtractions	
		Estimating by rounding when multiplying	
A. Natural numbers 2. Builds a repertoire of memorized addition and subtraction facts b. Develops various strategies that promote mastery of number facts and relates them to the properties of addition c. Masters all addition facts (0 + 0 to 10 + 10) and the corresponding subtraction facts	Add & subtract within 20	Addition & subtraction facts within 20	
		Adding using a number line	
		Adding using place value	
		Adding using a split strategy	
		Adding using rounding & compensating	
		Choosing mixed addition strategies	
		Subtracting using a number line	
		Subtracting using place value	
		Subtracting using a split strategy	
		Subtracting using rounding & compensating	
		Choosing mixed subtraction strategies	
		Multiply/divide: mental strategies	Multiplying using an area model
			Multiplying using doubling
			Dividing using halving
Choosing efficient multiplication strategies			
		Choosing efficient division strategies	

<p>A. Natural numbers</p> <p>4. Develops processes for written computation (addition and subtraction)</p> <p>b. Uses conventional processes to determine the sum of two natural numbers of up to four digits</p> <p>c. Uses conventional processes to determine the difference between two natural numbers of up to four digits whose result is greater than 0</p>	<p>Add/subtract: written strategies</p>	Addition of 3-digit & 1-digit numbers
		Addition of 3-digit & 2-digit numbers
		Addition of two 3-digit numbers
		Addition of two 4-digit numbers
		Subtraction of up to 4-digit numbers
		Subtraction of two 4-digit numbers with exchange
<p>A. Natural numbers</p> <p>5. Determines the missing term in an equation (relationships between operations)</p>	<p>Relationships between operations</p>	<p>Balance number sentences</p>
<p>A. Natural numbers</p> <p>6. Builds a repertoire of memorized multiplication and division facts</p> <p>a. Builds a memory of multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts, using objects, drawings, charts and tables</p> <p>b. Develops various strategies that promote mastery of number facts and relate them to the properties of multiplication</p> <p>c. Masters all multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts</p>	<p>Multiplication facts to 10 x 10</p>	Exploring multiplication by 3
		Exploring multiplication by 4
		Exploring multiplication by 5
		Exploring multiplication by 6
		Exploring multiplication by 7
		Exploring multiplication by 8
		Exploring multiplication by 9
		Exploring multiplication by 10
	<p>Division facts within 10</p>	Exploring division by 3
		Exploring division by 4
		Exploring division by 5
		Exploring division by 6
		Exploring division by 7
		Exploring division by 8
		Exploring division by 9
Exploring division by 10		
<p>Mixed multiplication & division practice</p>	Multiplying & dividing by 2s, 5s & 10s	
	Multiplying & dividing by 2, 5, 3 & 4	
<p>A. Natural numbers</p> <p>14. Adds new terms to a series when the first three terms or more are given</p>	<p>Generate patterns</p>	Generating addition & subtraction patterns
		Generating non-numerical patterns
<p>B. Fractions (using objects or diagrams)</p> <p>1. Generates a set of equivalent fractions</p>	<p>Generate equivalent fractions</p>	<p>Generating equivalent fractions</p>
<p>C. Decimals</p> <p>2. Develops processes for mental computation</p> <p>a. adds and subtracts decimals</p>	<p>Add & subtract decimals</p>	Adding decimals using models
		Adding decimals using mental strategies
		Subtracting decimals using models

2 Geometry

Outcome	Quests	Content
A. Space 2. Locates objects in a plane	Introduce the Cartesian plane	Locating objects on a plane
A. Space 4. Locates points in a Cartesian plane a. in the first quadrant b. in all four quadrants	Locate points in a Cartesian plane	Locating points in the first quadrant
B. Solids 1. Compares objects or parts of objects in the environment with solids	Compare solids with objects	Identifying pyramids in the environment Identifying prisms in the environment
B. Solids 8. Matches the net of a. a prism to the corresponding prism and vice versa b. a pyramid to the corresponding pyramid and vice versa	Nets of prisms	Introducing nets of prisms
D. Frieze patterns and tessellations 2. Observes and produces patterns using geometric figures	Observe patterns	Finding a rule for a shape pattern
D. Frieze patterns and tessellations 3. Observes and produces frieze patterns and tessellations a. using reflections	Explore reflections	Exploring reflections

3 Measurement

Outcome	Quests	Content
A. Lengths 4. Estimates and measures the dimensions of an object using conventional units b. metre, decimetre, centimetre and millimetre	Estimate & measure length	Reading lengths
		Introducing mm
A. Lengths 5. Establishes relationships between units of measure for length a. metre, decimetre, centimetre and millimetre	Relationship between units of length	Comparing cm & mm
		Ordering lengths in mm & cm
		Selecting appropriate units of measure: m, cm, mm
A. Lengths 6. Calculates the perimeter of plane figures	Calculate perimeter	Calculating the perimeter of plane figures
D. Angles 1. Compares angles	Measurement: angles	Comparing angles
E. Capacities 2. Estimates and measures capacity using conventional units	Measurement: capacity	Reading & measuring capacity
F. Masses 2. Estimates and measures mass using conventional units	Measurement: mass	Estimating & measuring mass
G. Time 1. Estimates and measures time using conventional units	Estimate & measure time	Telling time to the minute (analogue)
		Telling time to the minute (digital)
G. Time 2. Establishes relationships between units of measure	Relationship between units of time	Converting units of time
H. Temperature 1. Estimates and measures temperature using conventional units	Measurement: temperature	Estimating & measuring temperature

4 Statistics

Outcome	Quests	Content
2. Collects, describes and organizes data (classifies or categorizes) using tables	Collect, describe & organize data	Collecting & organizing data
3. Interprets data using b. a table, a bar graph, a pictograph and a broken-line graph	Interpret data	Using a bar graph
		Using a pictograph
		Using tables & bar graphs
		Using a line graph
		Comparing & reading graphs

5 Probability

Outcome	Quests	Content
2. When applicable, recognizes equiprobability	Recognize equiprobability in data	Recognizing equiprobability
3. When applicable, becomes aware of the independence of events in an experiment	Understand independence of events	Understanding the independence of events
4. Experiments with activities involving chance, using various objects	Chance experiments	Introducing chance experiments (unequal outcomes)
5. Predicts qualitatively an outcome or several events using a probability line, among other things a. certain, possible or impossible outcome b. more likely, just as likely, less likely event	Predict the outcome of an event	Predicting the outcome of events
9. Compares qualitatively the theoretical or experimental probability of events	Compare probability of events	Describing the probability of events occurring

Grade 5

1 Arithmetic

1.1 Understanding and writing numbers

Outcome	Quests	Content
A. Natural numbers less than 1 000 000. 1. Counts or recites counting rhymes involving natural numbers b. counts forward or backward. c. skip counts (e.g. by twos)	Count numbers to 1 000 000	Counting to 1 000 000
A. Natural numbers less than 1 000 000. 3. Reads and writes any natural number	Read & write numbers to 1 000 000	Reading & writing numbers to 1 000 000
A. Natural numbers less than 1 000 000. 4. Represents natural numbers in different ways or associates a number with a set of objects or drawings c. emphasis on place value in non-apparent, non-accessible groupings, using materials for which groupings are symbolic	Represent numbers to 1 000 000	Place value of numbers to 1 000 000
A. Natural numbers less than 1 000 000. 5. Composes and decomposes a natural number in a variety of ways (e.g. $123 = 100 + 23$, $123 = 100 + 20 + 3$, $123 = 50 + 50 + 20 + 3$, $123 = 2 \times 50 + 30 - 7$, $123 = 2 \times 60 + 3$)	Compose & decompose numbers to 1 000 000	Composing & decomposing numbers to 1 000 000
A. Natural numbers less than 1 000 000. 6. Identifies equivalent expressions (e.g. $52 = 40 + 12$, $25 + 27 = 40 + 12$, $52 = 104 \div 2$)	Identify equivalent expressions	Working with equivalent expressions
A. Natural numbers less than 1 000 000. 7. Compares natural numbers	Compare numbers to 1 000 000	Comparing numbers to 1 000 000
A. Natural numbers less than 1 000 000. 8. Arranges natural numbers in increasing or decreasing order	Order numbers to 1 000 000	Ordering numbers to 1 000 000

A. Natural numbers less than 1 000 000. 11. Identifies properties of natural numbers a. odd or even numbers. b. square, prime or composite numbers	Identify properties of numbers	Identifying & describing square numbers
A. Natural numbers less than 1 000 000. 12. Classifies natural numbers in various ways, based on their properties (e.g. even numbers, composite numbers)	Classify numbers to 1 000 000	Understanding prime & composite numbers
A. Natural numbers less than 1 000 000. 13. Approximates a collection, using objects or drawings (e.g. estimate, round up/down to a given value)	Approximate a collection to 1 000 000	Rounding numbers to 1 000 000
A. Natural numbers less than 1 000 000. 14. Represents the power of a natural number	Represent powers of numbers	Introducing square numbers
		Introducing cube numbers
B. Fractions (using objects or drawings). 2. Represents a fraction in a variety of ways, based on a whole or a collection of objects	Represent fractions	Representing a fraction in different ways
B. Fractions (using objects or drawings). 6. Reads and writes a fraction	Read & write fractions	Reading & writing fractions
B. Fractions (using objects or drawings). 7. Compares a fraction to 0, $\frac{1}{2}$ or 1	Compare fractions	Comparing fractions using benchmarks
B. Fractions (using objects or drawings). 8. Verifies whether two fractions are equivalent	Equivalence of fractions	Recognizing equivalent fractions
B. Fractions (using objects or drawings). 9. Matches a decimal or percentage to a fraction	Match fractions	Matching decimals & percentages to a fraction
B. Fractions (using objects or drawings). 10. Orders fractions with the same denominator	Order fractions - same denominator	Ordering fractions with the same denominator
B. Fractions (using objects or drawings). 11. Orders fractions where one denominator is a multiple of the other(s)	Order fractions - related denominator	Ordering fractions with related denominators
B. Fractions (using objects or drawings). 12. Orders fractions with the same numerator	Order fractions - same numerator	Ordering fractions with the same numerator
B. Fractions (using objects or drawings). 13. Locates fractions on a number line	Locate fractions on a number line	Locating fractions on a number line
C. Decimals up to thousandths. 1. Represents decimals in a variety of ways (using objects or drawings)	Represent decimals to thousandths	Representing decimals to thousandths

C. Decimals up to thousandths. 3. Reads and writes numbers written in decimal notation	Read & write decimals to thousandths	Reading & writing numbers to thousandths
C. Decimals up to thousandths. 5. Composes and decomposes a decimal written in decimal notation	Compose & decompose decimals	Composing & decomposing decimals to thousandths
C. Decimals up to thousandths. 6. Recognizes equivalent expressions (e.g. 12 tenths is equivalent to 1 unit and 2 tenths; 0.5 is equivalent to 0.50)	Recognize equivalent expressions	Recognizing equivalent expressions to thousandths
C. Decimals up to thousandths. 9. Approximates (e.g. estimates, rounds to a given value, truncates decimal places)	Approximate decimals	Rounding decimals to thousandths
C. Decimals up to thousandths. 10. Arranges decimals in increasing or decreasing order	Order decimals	Ordering decimals to thousandths
D. Integers. 1. Represents integers in a variety of ways (using objects or drawings) (e.g. tokens in two different colours, number line, thermometer, football field, elevator, hot air balloon)	Represent integers	Representing integers
D. Integers. 2. Reads and writes integers	Read & write integers	Reading & writing integers
D. Integers. 3. Locates integers on a number line or Cartesian plane	Locate integers	Locating integers on number lines

1.2 Meaning of operations involving numbers

Outcome	Quests	Content
A. Natural number less than 1 000 000. 1. Determines the operation(s) to perform in a given situation	Determine operations for word problems	Determining operations for word problems

1.3 Operations involving numbers

Outcome	Quests	Content
A. Natural numbers. 1. Approximates the result of a. an addition or subtraction involving natural numbers. b. any of the four	Approximate results of all operations	Approximating results when adding & subtracting
		Approximating results when multiplying & dividing

operations involving natural numbers		
A. Natural numbers. 2. Builds a repertoire of memorized addition and subtraction facts b. Develops various strategies that promote mastery of number facts and relates them to the properties of addition. c. Masters all addition facts (0 + 0 to 10 + 10) and the corresponding subtraction facts	Apply addition & subtraction facts to 10	Applying basic addition & subtraction facts to 10
A. Natural numbers. 3. Develops processes for mental computation a. Uses his/her own processes to determine the sum or difference of two natural numbers. b. Uses his/her own processes to determine the product or quotient of two natural numbers	Use mental strategies to add & subtract	Using mental strategies for addition & subtraction
	Use mental strategies to multiply	Using known facts strategies for multiplication
		Using doubling strategies for multiplication
		Using split method for multiplying
	Use mental strategies to divide	Using area method for multiplying
		Using place value strategies for division
Using known facts strategies for division		
A. Natural numbers. 4. Develops processes for written computation (addition and subtraction) b. Uses conventional processes to determine the sum of two natural numbers of up to four digits. c. Uses conventional processes to determine the difference between two natural numbers of up to four digits whose result is greater than 0	Use written methods to add & subtract	Using doubling & halving to divide
		Using written methods for addition
		Using written methods for subtraction
A. Natural numbers. 6. Builds a repertoire of memorized multiplication and division facts b. Develops various strategies that promote mastery of number facts and relate them to the properties of multiplication. c. Masters all multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts	Multiplication & division facts to 10 x 10	Using place value strategies for division
		Using known facts strategies for division
		Using doubling & halving to divide
		Using written methods for addition
		Using written methods for subtraction
		Recalling multiplication by 2
		Recalling multiplication by 3
		Recalling multiplication by 4
		Recalling multiplication by 5
		Recalling multiplication by 6
		Recalling multiplication by 7
		Recalling multiplication by 8
Recalling multiplication by 9		
Recalling multiplication by 10		
Recalling division by 2		
Recalling division by 3		
Recalling division by 4		
Recalling division by 5		

		Recalling division by 6
		Recalling division by 7
		Recalling division by 8
		Recalling division by 9
		Recalling division by 10
		Using properties of multiplication up to 10×10
A. Natural numbers. 7. Develops processes for written computation (multiplication and division) b. Uses conventional processes to determine the product of a three-digit natural number and a two-digit natural number c. Uses conventional processes to determine the quotient of a four-digit natural number and a two-digit natural number, expresses the remainder of a division as a decimal that does not go beyond the second decimal place	Use written methods to multiply & divide	Using written methods for multiplication
		Using written methods for division
A. Natural numbers. 8. Determines the missing term in an equation (relationships between operations): $a \times b = \square$, $a \times \square = c$, $\square \times b = c$, $a \div b = \square$, $a \div \square = c$, $\square \div b = c$	Determine missing terms in equations	Determining missing terms in 1-step equations
A. Natural numbers. 9. Decomposes a number into prime factors	Decompose a number into prime factors	Decomposing a number into prime factors
A. Natural numbers. 10. Calculates the power of a number	Calculate power of a number	Calculating the power of a number
A. Natural numbers. 11. Determines the divisibility of a number by 2, 3, 4, 5, 6, 8, 9, 10	Determine divisibility of a number	Determining the divisibility of the number 2
		Determining the divisibility of the number 3
		Determining the divisibility of the number 4
		Determining the divisibility of the number 5
		Determining the divisibility of the number 6
		Determining the divisibility of the number 8
		Determining the divisibility of the number 9
A. Natural numbers. 12. Performs a series of operations in accordance with the order of operations	Order of operations with whole numbers	Order of operations, addition & subtraction
		Order of operations, multiplication & division

A. Natural numbers. 14. Adds new terms to a series when the first three terms or more are given	Add new terms to a series	Adding new terms to a series
B. Fractions (using objects or diagrams). 1. Generates a set of equivalent fractions	Generate equivalent fractions	Generating equivalent fractions
B. Fractions (using objects or diagrams). 2. Reduces a fraction to its simplest form (lowest terms)	Reduce fractions to simplest form	Reducing a fraction to its simplest form
B. Fractions (using objects or diagrams). 1. Generates a set of equivalent fractions	Generate equivalent fractions	Generating equivalent fractions
B. Fractions (using objects or diagrams). 2. Reduces a fraction to its simplest form (lowest terms)	Reduce fractions to simplest form	Reducing a fraction to its simplest form
B. Fractions (using objects or diagrams). 3. Adds and subtracts fractions when the denominator of one fraction is a multiple of the other fraction(s)	Add/sub fractions - related denominators	Adding fractions with related denominators
		Subtracting fractions with related denominators
		Add & subtract fractions with related denominators
B. Fractions (using objects or diagrams). 4. Multiplies a natural number by a fraction	Multiply a natural number by a fraction	Multiplying a natural number by a fraction
C. Decimals. 1. Approximates the result of a. an addition or subtraction. b. a multiplication or division	Estimate - add/subtract decimals	Estimating addition & subtraction of decimals
C. Decimals. 2. Develops processes for mental computation a. adds and subtracts decimals. b. performs operations involving decimals (multiplication, division by a natural number). c. multiplies and divides by 10, 100, 1000)	Strategies to add & subtract decimals	Adding decimals using mental strategies
		Subtracting decimals using mental strategies
	Strategies to multiply & divide decimals	Multiplying decimals using mental strategies
		Dividing decimals using mental strategies
	Multiply decimals by 10, 100 & 1000	Multiplying decimals by 10, 100 & 1000
Divide decimals by 10, 100 & 1000	Dividing decimals by 10, 100 & 1000	
C. Decimals. 3. Develops processes for written computation a. adds and subtracts decimals whose result does not go beyond the second decimal place. b. multiplies decimals whose product does not go beyond the second decimal place. c. divides a decimal by a natural number less than 11	Multiply decimals to hundredths - formal	Multiplying decimals to hundredths - formal
	Divide decimals to hundredths - formal	Dividing decimals to hundredths - formal

D. Using numbers. 1. Expresses a decimal as a fraction, and vice versa	Express decimals as fractions	Expressing a decimal as a fraction
D. Using numbers. 2. Expresses a decimal as a percentage, and vice versa	Express decimals as percentages	Expressing a decimal as a percentage
D. Using numbers. 3. Expresses a fraction as a percentage, and vice versa	Express fractions as percentages	Expressing fractions as percentages

2 Geometry

2.1 Geometry

Outcome	Quests	Content
A. Space. 3. Locates objects on an axis (based on the types of numbers studied)	Locate objects on an axis	Locating objects on an axis
A. Space. 4. Locates points in a Cartesian plane b. in all four quadrants	Locate points in a Cartesian plane	Locating points in a Cartesian plane - 4 quadrants
B. Solids. 5. Describes prisms and pyramids in terms of faces, vertices and edges	Investigate prisms & pyramids	Investigating properties of prisms & pyramids
B. Solids. 6. Classifies prisms and pyramids	Compare & describe prisms & pyramids	Comparing, describing & naming prisms & pyramids
B. Solids. 7. Constructs a net of a prism or pyramid	Connect prisms & pyramids with nets	Connecting prisms & pyramids with nets
B. Solids. 8. Matches the net of c. a convex polyhedron to the corresponding convex polyhedron	Nets of convex polyhedrons	Matching nets of convex polyhedrons to objects
C. Plane figures. 5. Identifies and constructs parallel lines and perpendicular lines	Identify parallel & perpendicular lines	Identify parallel/perpendicular lines - 2D figures
C. Plane figures. 7. Classifies quadrilaterals	Classify quadrilaterals	Classifying quadrilaterals
C. Plane figures. 9. Classifies triangles	Classify triangles	Classifying triangles
C. Plane figures. 10. Describes circles	Describe circles	Describing circles
D. Frieze patterns and tessellations. 3. Observes and produces frieze patterns and tessellations a. using reflections. b. using translations	Frieze patterns & tessellations	Recognizing tessellations

3 Measurement

3.1 Measurement

Outcome	Quests	Content
A. Lengths. 4. Estimates and measures the dimensions of an object using conventional units c. metre, decimetre, centimetre, millimetre and kilometre	Measure length (m, cm, mm & km)	Introducing the kilometre
		Selecting appropriate units of length
A. Lengths. 5. Establishes relationships between units of measure for length b. metre, decimetre, centimetre, millimetre and kilometre	Relationship in length (m, cm, mm & km)	Comparing and ordering lengths
A. Lengths. 6. Calculates the perimeter of plane figures	Calculate perimeter	Calculate perimeter of polygons & composite shapes
B. Surface areas. 1. Estimates and measures surface area b. using conventional units	Estimate & measure area	Using formal units for area - square cm & square m
		Estimating & measuring area of rectangles
		Estimate & compare areas of non-rectilinear shapes
C. Volumes. 1. Estimates and measures volumes b. using conventional units	Estimate & measure volume	Estimating & measuring volume
D. Angles. 1. Compares angles	Compare angles	Comparing angles
D. Angles. 2. Estimates and determines the degree measurement of angles	Estimate & measure angles	Estimating & measuring angles
E. Capacities. 2. Estimates and measures capacity using conventional units	Estimate & measure capacity	Estimate & measure capacity - conventional units
E. Capacities. 3. Estimates relationships between units of measure	Relationship between capacity units	Relationships between units to measure capacity
F. Masses. 2. Estimates and measures mass using conventional units	Estimate & measure mass	Estimate & measure mass using conventional units
F. Masses. 3. Establishes relationships between units of measure	Relationship between mass units	Relationships between units to measure mass
G. Time. 1. Estimates and measures time using conventional units	Estimate & measure time	Estimating & measuring time
G. Time. 2. Establishes relationships between units of measure	Convert between units of time	Converting between units of time

H. Temperature. 1. Estimates and measures temperature using conventional units	Estimate & measure temperature	Estimating & measuring temperature
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4 Statistics

4.1 Statistics

Outcome	Quests	Content
3. Interprets data using c. a table, a bar graph, a pictograph, a broken-line graph and a circle graph	Interpret data	Interpreting data using tables
		Interpreting data using bar graphs
		Interpreting data using broken-line graphs
		Interpreting data using circle graphs
5. Understands and calculates the arithmetic mean	Understand & calculate arithmetic mean	Understanding & calculating arithmetic mean

5 Probability

5.1 Probability

Outcome	Quests	Content
1. When applicable, recognizes variability in possible outcomes (uncertainty)	Recognize variability	Recognizing variability in possible outcomes
2. When applicable, recognizes equiprobability	Recognize equiprobability	Recognizing equiprobability
5. Predicts qualitatively an outcome or several events using a probability line, among other things. a. certain, possible or impossible outcome b. more likely, just as likely, less likely event	Predict an outcome	Predicting an outcome
8. Enumerates possible outcomes of b. a random experiment, using tables, a tree diagram	Possible outcomes of random experiment	Listing possible outcomes - tables & tree diagrams
10. Recognizes that a probability is always between 0 and 1	Recognize probability is between 0 & 1	Recognizing probability is between 0 & 1
11. Uses fractions, decimals or percentages to quantify a probability	Use fractions, decimals or percentages	Using fractions, decimals or percentages
12. Compares the outcomes of a random experiment with known theoretical probabilities	Compare outcomes/theoretical probability	Comparing outcomes with theoretical probabilities
13. Simulates random experiments with or without the use of technology	Conduct random experiments (technology)	Conducting random experiments using technology

Grade 6

1 Arithmetic

1.1 Understanding and writing numbers

Outcome	Quests	Content
A. Natural numbers less than 1 000 000. 1. Counts or recites counting rhymes involving natural numbers b. counts forward or backward. c. skip counts (e.g. by twos)	Count numbers to 1 000 000	Counting to 1 000 000
A. Natural numbers less than 1 000 000. 3. Reads and writes any natural number	Read & write numbers to 1 000 000	Reading & writing numbers to 1 000 000
A. Natural numbers less than 1 000 000. 4. Represents natural numbers in different ways or associates a number with a set of objects or drawings c. emphasis on place value in non-apparent, non-accessible groupings, using materials for which groupings are symbolic	Represent numbers to 1 000 000	Place value of numbers to 1 000 000
A. Natural numbers less than 1 000 000. 5. Composes and decomposes a natural number in a variety of ways (e.g. $123 = 100 + 23$, $123 = 100 + 20 + 3$, $123 = 50 + 50 + 20 + 3$, $123 = 2 \times 50 + 30 - 7$, $123 = 2 \times 60 + 3$)	Compose/decompose numbers to 1 000 000	Composing & decomposing numbers to 1 000 000
A. Natural numbers less than 1 000 000. 6. Identifies equivalent expressions (e.g. $52 = 40 + 12$, $25 + 27 = 40 + 12$, $52 = 104 \div 2$)	Identify equivalent expressions	Identifying equivalent expressions
A. Natural numbers less than 1 000 000. 7. Compares natural numbers	Compare numbers to 1 000 000	Comparing numbers to 1 000 000
A. Natural numbers less than 1 000 000. 8. Arranges natural numbers in increasing or decreasing order	Order numbers to 1 000 000	Ordering numbers to 1 000 000

A. Natural numbers less than 1 000 000. 12. Classifies natural numbers in various ways, based on their properties (e.g. even numbers, composite numbers)	Classify numbers by properties	Understanding prime & composite numbers
A. Natural numbers less than 1 000 000. 13. Approximates a collection, using objects or drawings (e.g. estimate, round up/down to a given value)	Approximate a collection to 1 000 000	Rounding numbers to 1 000 000
B. Fractions (using objects or drawings). 2. Represents a fraction in a variety of ways, based on a whole or a collection of objects	Represent fractions	Representing a fraction in different ways
B. Fractions (using objects or drawings). 4. Identifies the different meanings of fractions (sharing, division, ratio)	Understand meaning of fractions	Identifying fractions as division
B. Fractions (using objects or drawings). 8. Verifies whether two fractions are equivalent	Recognize equivalent fractions	Recognizing equivalent fractions
B. Fractions (using objects or drawings). 9. Matches a decimal or percentage to a fraction	Matching decimals	Matching decimals & percentages to a fraction
B. Fractions (using objects or drawings). 11. Orders fractions where one denominator is a multiple of the other(s)	Order fractions: related denominators	Ordering fractions with related denominators
B. Fractions (using objects or drawings). 12. Orders fractions with the same numerator	Order fractions: same numerator	Ordering fractions with the same numerator
C. Decimals up to thousandths. 3. Reads and writes numbers written in decimal notation	Read & write decimals to thousandths	Reading & writing numbers to thousandths
C. Decimals up to thousandths. 5. Composes and decomposes a decimal written in decimal notation	Compose/decompose decimals	Composing & decomposing decimals to thousandths
C. Decimals up to thousandths. 6. Recognizes equivalent expressions (e.g. 12 tenths is equivalent to 1 unit and 2 tenths; 0.5 is equivalent to 0.50)	Recognize equivalent expressions	Recognizing equivalent expressions to thousandths
C. Decimals up to thousandths. 7. Locates decimals on a number line a. between two consecutive natural numbers. b. between two decimals	Locate decimals on a number line	Locating decimals on a number line
C. Decimals up to thousandths. 9. Approximates (e.g. estimates, rounds to a given value, truncates decimal places)	Approximate decimals	Rounding decimals to thousandths

C. Decimals up to thousandths. 10. Arranges decimals in increasing or decreasing order	Order decimals to thousandths	Ordering decimals to thousandths
C. Decimals up to thousandths. 11. Matches. a. a fraction to its decimal. b. a fraction or percentage to its decimal	Match decimals	Relationship - decimals, fractions & percentages
D. Integers. 1. Represents integers in a variety of ways (using objects or drawings) (e.g. tokens in two different colours, number line, thermometer, football field, elevator, hot air balloon)	Represent integers	Representing integers
D. Integers. 2. Reads and writes integers	Read & write integers	Reading & writing integers

1.2 Meaning of operations involving numbers

Outcome	Quests	Content
A. Natural number less than 1 000 000. 1. Determines the operation(s) to perform in a given situation	Determine operations to use	Determining operations to use in a word problem
A. Natural number less than 1 000 000. 4. Establishes equality relations between numerical expressions	Equality between numerical expressions	Establishing equality between expressions

1.3 Operations involving numbers

Outcome	Quests	Content
A. Natural numbers. 1. Approximates the result of a. an addition or subtraction involving natural numbers. b. any of the four operations involving natural numbers	Approximate results of all operations	Approximating results when adding & subtracting
		Approximating results when multiplying & dividing
A. Natural numbers. 3. Develops processes for mental computation a. Uses his/her own processes to determine the sum or difference of two natural numbers. b. Uses his/her own processes to determine the product or quotient of two natural numbers	Mental strategies - add & subtract	Using mental strategies for addition & subtraction
	Mental strategies - multiply & divide	Using mental computation strategies to multiply Using mental computation strategies to divide

A. Natural numbers. 4. Develops processes for written computation (addition and subtraction) b. Uses conventional processes to determine the sum of two natural numbers of up to four digits. c. Uses conventional processes to determine the difference between two natural numbers of up to four digits whose result is greater than 0	Solve word problems - add & subtract	Solving word problems - addition & subtraction
A. Natural numbers. 6. Builds a repertoire of memorized multiplication and division facts b. Develops various strategies that promote mastery of number facts and relate them to the properties of multiplication. c. Masters all multiplication facts (0 x 0 to 10 x 10) and the corresponding division facts	Use multiplication facts to 10 x 10	Mastering multiplication facts to 10 x 10
A. Natural numbers. 7. Develops processes for written computation (multiplication and division) b. Uses conventional processes to determine the product of a three-digit natural number and a two-digit natural number c. Uses conventional processes to determine the quotient of a four-digit natural number and a two-digit natural number, expresses the remainder of a division as a decimal that does not go beyond the second decimal place	Use written methods - multiply & divide	Using written methods for multiplication
		Using written methods for division
A. Natural numbers. 8. Determines the missing term in an equation (relationships between operations): $a \times b = \square$, $a \times \square = c$, $\square \times b = c$, $a \div b = \square$, $a \div \square = c$, $\square \div b = c$	Determine missing terms in equations	Determining missing terms in 1-step equations
A. Natural numbers. 9. Decomposes a number into prime factors	Decompose a number into prime factors	Decomposing a number into prime factors
A. Natural numbers. 10. Calculates the power of a number	Calculate power of a number	Calculating the power of a number
A. Natural numbers. 11. Determines the divisibility of a number by 2, 3, 4, 5, 6, 8, 9, 10	Determine divisibility of a number	Determining the divisibility of the number 2
		Determining the divisibility of the number 3
		Determining the divisibility of the number 4
		Determining the divisibility of the number 5

		Determining the divisibility of the number 6
		Determining the divisibility of the number 8
		Determining the divisibility of the number 9
A. Natural numbers. 12. Performs a series of operations in accordance with the order of operations	Order of operations with whole numbers	Order of operations, 4 operations
		Order of operations, grouping symbols
		Applying order of operations to real-life contexts
A. Natural numbers. 14. Adds new terms to a series when the first three terms or more are given	Add new terms to a series	Adding new terms when adding & subtracting
		Adding new terms when multiplying & dividing
B. Fractions (using objects or diagrams). 1. Generates a set of equivalent fractions	Generate equivalent fractions	Generating equivalent fractions
B. Fractions (using objects or diagrams). 2. Reduces a fraction to its simplest form (lowest terms)	Reduce fractions to simplest form	Reducing fractions to their simplest form
B. Fractions (using objects or diagrams). 3. Adds and subtracts fractions when the denominator of one fraction is a multiple of the other fraction(s)	Work with fractions related denominators	Adding fractions with related denominators
		Subtracting fractions with related denominators
		Add & subtract fractions with related denominators
B. Fractions (using objects or diagrams). 4. Multiplies a natural number by a fraction	Multiply natural numbers by fractions	Multiplying natural numbers by fractions
C. Decimals. 2. Develops processes for mental computation a. adds and subtracts decimals. b. performs operations involving decimals (multiplication, division by a natural number). c. multiplies and divides by 10, 100, 1000)	Mental strategies with decimals	Adding decimals using mental strategies
		Subtracting decimals using mental strategies
		Multiplying decimals using mental strategies
		Dividing decimals using mental strategies
		Multiplying decimals by 10, 100 & 1000
		Dividing decimals by 10, 100 & 1000
C. Decimals. 3. Develops processes for written computation a. adds and subtracts decimals whose result does not go beyond the second decimal place. b. multiplies decimals whose product does not go beyond the second decimal	Written strategies with decimals	Multiplying decimals - written strategy
		Dividing decimals - written strategy

place. c. divides a decimal by a natural number less than 11		
D. Using Numbers. 1. Expresses a decimal as a fraction, and vice versa	Express decimals as fractions	Expressing decimals as fractions
D. Using Numbers. 2. Expresses a decimal as a percentage, and vice versa	Express decimals as percentages	Expressing decimals as percentages
D. Using Numbers. 3. Expresses a fraction as a percentage, and vice versa	Express fractions as a percentage	Expressing fractions as percentages

2 Geometry

2.1 Geometry

Outcome	Quests	Content
A. Space. 3. Locates objects on an axis (based on the types of numbers studied)	Locate objects on an axis	Locating objects on an axis
A. Space. 4. Locates points in a Cartesian plane b. in all four quadrants	Locate points in a Cartesian plane	Locating points in a Cartesian plane - 4 quadrants
B. Solids. 5. Describes prisms and pyramids in terms of faces, vertices and edges	Investigate properties of prisms & pyramids	Investigating properties of prisms & pyramids
B. Solids. 6. Classifies prisms and pyramids	Compare & describe prisms & pyramids	Comparing, describing & naming prisms & pyramids
B. Solids. 7. Constructs a net of a prism or pyramid	Connect prisms & pyramids with nets	Connecting prisms & pyramids with nets
B. Solids. 8. Matches the net of c. a convex polyhedron to the corresponding convex polyhedron	Nets of convex polyhedrons	Matching nets of convex polyhedrons to objects
C. Plane figures. 5. Identifies and constructs parallel lines and perpendicular lines	Identify parallel & perpendicular lines	Identifying parallel & perpendicular lines
C. Plane figures. 7. Classifies quadrilaterals	Classify quadrilaterals	Classifying quadrilaterals
C. Plane figures. 9. Classifies triangles	Classify triangles	Classifying triangles
C. Plane figures. 10. Describes circles	Describe circles	Describing circles
D. Frieze patterns and tessellations. 3. Observes and produces frieze patterns and tessellations a. using reflections. b. using translations	Frieze patterns & tessellations	Recognizing & creating tessellations

3 Measurement

3.1 Measurement

Outcome	Quests	Content
A. Lengths. 4. Estimates and measures the dimensions of an object using conventional units c. metre, decimetre, centimetre, millimetre and kilometre	Measure length (m, cm, mm & km)	Estimating & measuring length Recording lengths - mixed units & decimal notation
A. Lengths. 5. Establishes relationships between units of measure for length b. metre, decimetre, centimetre, millimetre and kilometre	Relationship in length (m, cm, mm & km)	Converting between units of length
B. Surface areas. 1. Estimates and measures surface area b. using conventional units	Work with formula for area	Working with multiplicative formula for area
C. Volumes. 1. Estimates and measures volumes b. using conventional units	Estimate & measure volume	Estimating & measuring volume
D. Angles. 1. Compares angles	Compare angles	Comparing angles
D. Angles. 2. Estimates and determines the degree measurement of angles	Estimate & measure angles	Estimating & measuring angles
E. Capacities. 2. Estimates and measures capacity using conventional units	Estimate & measure capacity	Estimate & measure capacity - conventional units
E. Capacities. 3. Estimates relationships between units of measure	Relationship between capacity units	Relationships between units to measure capacity
F. Masses. 2. Estimates and measures mass using conventional units	Estimate, measure & understand mass	Estimate & measure mass using conventional units
F. Masses. 3. Establishes relationships between units of measure	Relationship between mass units	Relationships between units to measure mass
G. Time. 2. Establishes relationships between units of measure	Convert between units of time	Converting between units of time Understanding 24-hour time
H. Temperature. 1. Estimates and measures temperature using conventional units	Estimate & measure temperature	Estimating & measuring temperature

4 Statistics

4.1 Statistics

Outcome	Quests	Content
3. Interprets data using c. a table, a bar graph, a pictograph, a broken-line graph and a circle graph	Interpret data	Interpreting data using tables
		Interpreting data using bar graphs
		Interpreting data using broken-line graphs
		Interpreting data using circle graphs
5. Understands and calculates the arithmetic mean	Calculate arithmetic mean	Calculating arithmetic mean

5 Probability

5.1 Probability

Outcome	Quests	Content
1. When applicable, recognizes variability in possible outcomes (uncertainty)	Recognize variability	Recognizing variability in possible outcomes
2. When applicable, recognizes equiprobability	Recognize equiprobability	Recognizing equiprobability
5. Predicts qualitatively an outcome or several events using a probability line, among other things. a. certain, possible or impossible outcome b. more likely, just as likely, less likely event	Predict an outcome	Predicting an outcome
8. Enumerates possible outcomes of a random experiment, using tables, a tree diagram	Possible outcomes of random experiment	Listing possible outcomes - tables & tree diagrams
10. Recognizes that a probability is always between 0 and 1	Recognize probability is between 0 & 1	Recognizing probability is between 0 & 1
11. Uses fractions, decimals or percentages to quantify a probability	Use fractions, decimals or percentages	Using fractions, decimals or percentages
12. Compares the outcomes of a random experiment with known theoretical probabilities	Compare outcomes/theoretical probability	Comparing outcomes with theoretical probabilities
13. Simulates random experiments with or without the use of technology	Conduct random experiments (technology)	Conducting random experiments using technology



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