



CAMI Education linked to CAPS: Mathematics

GRADE 04 CAPS Curriculum		
TERM 1		
TOPICS	CONCEPT AND SKILLS	CAMI Keys
Mental calculations	<p>Mental calculations involving:</p> <ul style="list-style-type: none"> Addition and subtraction facts for: <ul style="list-style-type: none"> ❖ Units ❖ Multiples of 10 ❖ Multiples of 100 ❖ Multiples of 1 000 Multiplication of whole numbers to at least 10×10 Multiplication facts for: <ul style="list-style-type: none"> ❖ Units by multiples of 10 ❖ Units by multiples of 100 <p>Number range for counting, ordering, comparing and representing, and place value of digits</p> <ul style="list-style-type: none"> Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s, 100s between 0 and at least 10 000 Order, compare and represent numbers to at least 4-digit numbers Represent odd and even numbers to at least 1 000 Recognize the place value of digits in whole numbers to at least 4-digit numbers Round off to the nearest 10, 100 and 1 000 <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> Estimation Building up and breaking down numbers Rounding off and compensation Doubling and halving 	<p>3.3.3.10 3.3.4.9 3.3.5.4 3.3.5.9 3.3.4.9 3.3.6.4 3.3.6.9</p> <p>1.1.2.7 1.1.2.8 1.1.8.2 1.1.8.3 1.1.8.4 1.1.8.9 1.1.9.3 1.1.9.4 1.1.9.7 1.1.9.8 1.1.10.3 1.7.1.2 1.7.1.3 1.7.1.4 1.7.1.5</p> <p>1.2.9.1 1.2.9.10 1.2.9.2 1.2.9.3 1.2.9.4 1.2.9.5 1.2.9.6</p>



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	<ul style="list-style-type: none"> Using a number line Using addition and subtraction as inverse operations Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers.</p>	<p>1.2.9.7 1.2.9.8 1.2.9.9 1.7.10.1 1.7.10.2 1.7.10.3 1.7.10.4 1.7.10.5 1.7.10.6 1.7.10.7 1.7.10.8 1.7.2.1 1.7.2.2 1.7.2.3 1.7.3.4 1.7.3.5 1.7.3.6 1.7.3.7 1.7.7.1 1.7.7.6 3.1.9.2 3.1.9.3</p>
1.1 Whole numbers	<p>Number range for counting, ordering, comparing, representing and place value of digits</p> <ul style="list-style-type: none"> Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s and 100s between 0 and at least 10 000 Order, compare and represent numbers to at least 4-digit numbers Represent odd and even numbers to at least 1 000 Recognize the place value of digits in whole numbers to at least 4-digit numbers Round off to the nearest 10, 100 and 1 000 	<p>1.1.2.7 1.1.2.8 1.1.8.2 1.1.8.3 1.1.8.4 1.1.8.9 1.1.9.3 1.1.9.4 1.1.9.7 1.1.9.8 1.1.10.3 1.7.8.4 1.7.9.2</p>
2.1 Number sentences	<p>Number sentences</p> <ul style="list-style-type: none"> Write number sentences to describe 	<p>3.2.5.1</p>



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	<p>problem situations</p> <ul style="list-style-type: none"> • Solve and complete number sentences by: <ul style="list-style-type: none"> ❖ Inspection ❖ Trial and improvement ❖ Substitution 	<p>3.2.5.2</p>
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculation Addition and subtraction of whole numbers to at least 4 digits</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> ❖ Estimation ❖ Building up and breaking down numbers ❖ Rounding off and compensation ❖ Doubling and halving ❖ Using a number line ❖ Using addition and subtraction as inverse operations ❖ Using multiplication and division as inverse operations <p>Properties of whole numbers Recognize and use the commutative and associative properties of whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p>	<p>1.2.6.6 1.2.6.7 1.2.7.4 1.2.7.5 1.3.7.2 1.3.8.1 1.3.8.2 1.3.8.3 1.3.8.4 1.7.6.5</p> <p>1.8.8.4 1.8.8.5 1.8.8.6 1.8.8.7</p> <p>3.8.4.6 3.8.4.7</p>
<p>2.1 Numeric patterns</p>	<p>Investigate and extend patterns</p> <ul style="list-style-type: none"> • Investigate and extend numeric patterns looking for relationships or rules of patterns: <ul style="list-style-type: none"> ❖ Sequences involving a constant difference or ratio ❖ Of learner's own creation 	<p>3.2.5.1 3.2.5.2</p>



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	<ul style="list-style-type: none"> Describe observed relationships or rules in learner's own words <p>Input and output values Determine input values, output values and rules for patterns and relationships using flow diagrams</p> <p>Equivalent forms Determine equivalence of different descriptions of the same relationship or rule presented:</p> <ul style="list-style-type: none"> Verbally In a flow diagram By a number sentence 	
<p>1.1 Whole numbers Multiplication</p>	<p>Number range for calculations</p> <ul style="list-style-type: none"> Multiplication of at least whole 2-digit by 2-digit numbers Division of at least whole 3-digit by 1-digit numbers <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> Estimation Building up and breaking down numbers Rounding off and compensation Doubling and halving Using a number line Using addition and subtraction as inverse operations Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers</p>	<p>3.8.3.4 1.4.1.10 1.4.1.6 1.4.1.8 1.4.1.9 1.4.2.1 1.4.2.2 1.4.2.3 1.4.2.6 1.4.2.7 1.4.2.8 1.4.2.9 1.4.3.1 1.4.3.2 1.4.4.1 1.4.4.2 1.4.6.1 1.4.6.2 1.4.6.3 1.4.6.4 1.4.6.5 3.1.3.1 3.1.3.2 3.1.3.3 3.2.2.2</p>



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	<p>Recognize and use the commutative, associative and distributive properties of whole numbers.</p> <p>Solving problems</p> <ul style="list-style-type: none">• Solve problems in contexts involving whole numbers:<ul style="list-style-type: none">❖ Financial contexts❖ Measurement contexts• Solve problems involving whole numbers:<ul style="list-style-type: none">❖ Comparing two or more quantities of the same kind (ratio)❖ Comparing two quantities of different kinds (rate)❖ Grouping and equal sharing with remainders	<p>3.2.2.3 3.6.4.3 3.6.5.3 3.6.6.3 3.7.3.3 3.7.4.3 3.8.7.1 3.8.4.6 3.8.4.7 3.8.7.1</p>
<p>4.4 Time</p>	<p>Reading time and time instruments Read, tell and write time in 12-hour and 24-hour formats on both analogue and digital instruments in:</p> <ul style="list-style-type: none">• Hours• Minutes• Seconds <p>Instruments include clocks and watches</p> <p>Reading calendars</p> <p>Calculations and problem solving with time include</p> <ul style="list-style-type: none">• Calculation of the number of days between any two dates within the same or consecutive years• Calculations of time intervals where time is given in minutes or hours only <p>History of time Knows how time was measured and represented in ancient times</p>	<p>3.8.6.6 9.2.1.1 9.2.1.5 9.2.1.6 9.2.1.7 9.2.1.8 9.2.1.9 9.2.2.1 9.2.2.2 9.2.2.3 9.2.2.4 9.2.2.5 9.2.2.6 9.2.2.7 9.2.2.8 9.2.2.9 9.2.3.1 9.2.3.2 9.2.3.3 9.2.3.4 9.2.3.5 9.2.4.1</p>



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		9.2.4.2
5.1 Collecting and organizing data	Collect data using tally marks and tables for recording	10.1.1.2 10.1.1.3
5.2 Representing data	Draw a variety of graphs to display and interpret data including: <ul style="list-style-type: none"> • Pictographs (one-to-one representation) • Bar graphs 	10.1.2.1 10.1.2.2 10.1.2.4
5.3 Analyzing, interpreting and reporting data	Critically read and interpret data represented in <ul style="list-style-type: none"> • Words • Pictographs • Bar graphs • Pie graphs Analyze data by answering questions related to data categories Summarize data verbally and in short written paragraphs	10.1.4.1
3.1 Properties of 2D shapes	Shapes learners need to know and name: <ul style="list-style-type: none"> • Regular and irregular polygons: <ul style="list-style-type: none"> ❖ Triangles ❖ Squares, rectangles ❖ Other quadrilaterals ❖ Pentagons ❖ Hexagons • Circles The characteristics which learners use to distinguish, describe, sort and compare shapes <ul style="list-style-type: none"> • Straight and/curved sides • Number of sides Further activities to focus on the characteristics of shapes Draw 2D shapes on grid paper	8.1.1.4 8.1.1.2 8.1.1.5



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<p>1.1 Whole numbers Multiplication</p>	<p>Number range for calculations</p> <ul style="list-style-type: none"> • Multiplication of at least whole 2-digit by 2-digit numbers • Division of at least whole 3-digit by 1-digit numbers <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Rounding off and compensation • Doubling and halving • Using a number line • Using addition and subtraction as inverse operations • Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers</p> <p>Solving problems</p> <ul style="list-style-type: none"> • Solve problems in contexts involving whole numbers, including <ul style="list-style-type: none"> ❖ Financial contexts ❖ Measurement contexts • Solve problems involving whole numbers, including <ul style="list-style-type: none"> ❖ Comparing two or more quantities of the same kind (ratio) ❖ Comparing two quantities of different kinds (rate) 	<p>1.4.1.10 1.4.1.6 1.4.1.8 1.4.1.9 1.4.2.1 1.4.2.2 1.4.2.3 1.4.2.6 1.4.2.7 1.4.2.8 1.4.2.9 1.4.3.1 1.4.3.2 1.4.4.1 1.4.4.2 1.4.6.1 1.4.6.2 1.4.6.3 1.4.6.4 1.4.6.5 3.1.3.1 3.1.3.2 3.1.3.3 3.2.2.2 3.2.2.3 3.6.4.3 3.6.5.3 3.6.6.3 3.7.3.3 3.7.4.3 3.8.7.1</p>
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	❖ Grouping and equal sharing with remainders	
TERM 2		
Mental Mathematics	<p>Mental calculations involving:</p> <ul style="list-style-type: none">• Addition and subtraction facts for:<ul style="list-style-type: none">❖ Units❖ Multiples of 10❖ Multiples of 100❖ Multiples of 1 000• Multiplication of whole numbers to at least 10×10• Multiplication facts for:<ul style="list-style-type: none">❖ Units by multiples of 10❖ Units by multiples of 100 <p>Number range for counting, ordering, comparing and representing, and place value of digits</p> <ul style="list-style-type: none">• Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s, 100s between 0 and at least 10 000• Order, compare and represent numbers to at least 4-digit numbers• Represent odd and even numbers to at least 1 000• Recognize the place value of digits in whole numbers to at least 4-digit numbers• Round off to the nearest 10, 100 and 1 000 <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none">• Estimation• Building up and breaking down numbers• Rounding off and compensation	Same as Term 1



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	<ul style="list-style-type: none"> • Doubling and halving • Using a number line • Using addition and subtraction as inverse operations • Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers.</p>	
<p>1.1 Whole numbers</p>	<p>Number range for counting, ordering, comparing, representing and place value of digits</p> <ul style="list-style-type: none"> • Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s and 100s between 0 and at least 10 000 • Order, compare and represent numbers to at least 4-digit numbers • Represent odd and even numbers to at least 1 000 • Recognize the place value of digits in whole numbers to at least 4-digit numbers • Round off to the nearest 10, 100 and 1 000 	<p>1.1.2.7 1.1.2.8 1.1.8.2 1.1.8.3 1.1.8.4 1.1.8.9 1.1.9.3 1.1.9.4 1.1.9.7 1.1.9.8 1.1.10.3 1.7.8.4 1.7.9.2</p>
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculation Addition and subtraction of whole numbers to at least 4 digits</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> ❖ Estimation 	<p>1.2.6.6 1.2.6.7 1.2.7.4 1.2.7.5 1.3.7.2 1.3.8.1 1.3.8.2 1.3.8.3 1.3.8.4</p>



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	<ul style="list-style-type: none"> ❖ Building up and breaking down numbers ❖ Rounding off and compensation ❖ Doubling and halving ❖ Using a number line ❖ Using addition and subtraction as inverse operations ❖ Using multiplication and division as inverse operations <p>Properties of whole numbers Recognize and use the commutative and associative properties of whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p>	<p>1.7.6.5</p> <p>1.8.8.4 1.8.8.5 1.8.8.6 1.8.8.7</p> <p>3.8.4.6 3.8.4.7</p>
<p>1.2 Common fractions</p>	<p>Solving problems Solve problems in context involving fractions, including grouping and equal sharing</p> <p>Describing and ordering fractions</p> <ul style="list-style-type: none"> • Compare and order common fractions of different denominators (halves, thirds, quarters, fifths, sixths, sevenths, eighths) • Describe and compare fractions with same denominators <p>Equivalent forms Recognize and use equivalent forms of common fractions (denominators which are multiples of each other)</p>	<p>3.8.2.5 2.1.1.3 2.1.1.4 2.1.1.5 2.1.1.7 2.1.2.5 2.1.2.6 2.1.4.1 2.1.4.2 2.1.4.5 2.1.4.6 2.1.5.1 2.1.5.4 2.2.2.2 3.4.5.1 3.4.6.1</p>
<p>4.1 Length</p>	<p>Practical measuring of 2D shapes and 3D objects by</p> <ul style="list-style-type: none"> • Estimating • Measuring • Recording 	<p>3.8.6.1 9.1.2.1 9.1.1.2</p>



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	<ul style="list-style-type: none"> Comparing and ordering <p>Measuring instruments Rulers, meter sticks, tape measures, trundle wheels</p> <p>Units Millimeters(mm), centimeters(cm), meters(m),kilometers(km)</p> <p>Calculations and problem solving related to length Solve problems in contexts related to length Conversions include converting between:</p> <ul style="list-style-type: none"> mm → cm cm → m m → km <p>conversions are limited to whole numbers and fractions</p>	
<p>1.1 Whole numbers Multiplication</p>	<p>Number range for calculations</p> <ul style="list-style-type: none"> multiplication of at least whole 2-digit by 2-digit numbers <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations with whole numbers including:</p> <ul style="list-style-type: none"> Estimation Building up and breaking down numbers Rounding off and compensating Doubling and halving <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of</p>	<p>1.4.1.10 1.4.1.6 1.4.1.8 1.4.1.9 1.4.2.1 1.4.2.2 1.4.2.3 1.4.2.6 1.4.2.7 1.4.2.8 1.4.2.9 1.4.3.1 1.4.3.2 1.4.4.1 1.4.4.2 1.4.6.1 1.4.6.2 1.4.6.3 1.4.6.4 1.4.6.5 3.1.3.1</p>



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	<p>whole numbers</p> <p>Solving problems</p> <ul style="list-style-type: none">• Solve problems in contexts involving whole numbers, including<ul style="list-style-type: none">❖ Comparing two or more quantities of the same kind (ratio)❖ Comparing two quantities of different kinds (rate)	<p>3.1.3.2</p> <p>3.1.3.3</p> <p>3.2.2.2</p> <p>3.2.2.3</p> <p>3.6.4.3</p> <p>3.6.5.3</p> <p>3.6.6.3</p> <p>3.7.3.3</p> <p>3.7.4.3</p> <p>3.8.7.1</p>
<p>3.2</p> <p>Properties of 3D objects</p>	<p>Objects learners need to know and name</p> <ul style="list-style-type: none">❖ Rectangular prism❖ Spheres❖ Cylinders❖ Cones❖ Square-based pyramids <p>Characteristics which learners use to distinguish, describe, sort and compare objects</p> <ul style="list-style-type: none">• Shapes and faces• Flat and curved surfaces <p>Further activities to focus learners on characteristics of objects</p> <p>Create 3D models using cut-out polygons</p>	<p>8.1.2.2</p>
<p>2.2</p> <p>Geometric patterns</p>	<p>Investigate and extend patterns</p> <ul style="list-style-type: none">• Investigate and extend geometric patterns looking for relationships or rules of patterns<ul style="list-style-type: none">❖ Represented in physical or diagram form❖ Sequences involving a constant difference or ratio❖ Of learner's own creation• Describe observed relationships or rules in learner's own words <p>Input and output values</p>	<p>4.1.1.5</p>



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	<ul style="list-style-type: none"> Determine input values, output values and rules for the patterns and relationships using flow diagrams <p>Equivalent forms</p> <ul style="list-style-type: none"> Determine equivalence of different descriptions of the same relationship or rule presented Verbally In a flow diagram By a number sentence 	
3.3 Symmetry	Recognize, draw and describe line of symmetry in 2D shapes	8.10.1.4
1.1 Whole numbers Addition and subtraction	<p>Number range for calculation Addition and subtraction of whole numbers to at least 4 digits</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> ❖ Estimation ❖ Building up and breaking down numbers ❖ Rounding off and compensation ❖ Doubling and halving ❖ Using a number line ❖ Using addition and subtraction as inverse operations ❖ Using multiplication and division as inverse operations <p>Properties of whole numbers Recognize and use the commutative and associative properties of whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p>	1.2.6.6 1.2.6.7 1.2.7.4 1.2.7.5 1.3.7.2 1.3.8.1 1.3.8.2 1.3.8.3 1.3.8.4 1.7.6.5 1.8.8.4 1.8.8.5 1.8.8.6 1.8.8.7 3.8.4.6 3.8.4.7



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<p>1.1 Whole numbers Division</p>	<p>Number range for calculations</p> <ul style="list-style-type: none"> • Division of at least whole 3-digit by 1-digit numbers <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Rounding off and compensation • Doubling and halving • Using a number line • Using addition and subtraction as inverse operations • Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers.</p> <p>Solving problems</p> <ul style="list-style-type: none"> • Solve problems in contexts involving whole numbers: <ul style="list-style-type: none"> ❖ Financial contexts ❖ Measurement contexts • Solve problems involving whole numbers, including <ul style="list-style-type: none"> ❖ Grouping and equal sharing with remainders ❖ Comparing two or more quantities of the same kind (ratio) ❖ Comparing two quantities of different kinds (rate) 	<p>1.5.1.3 1.5.1.5 1.5.1.6 1.5.1.9 1.5.3.1 1.5.3.2 1.5.3.3 1.5.3.4 1.5.3.5 1.5.3.6 1.5.4.1 1.5.4.2 1.5.4.3 1.5.4.4 3.1.4.1 3.1.4.2 3.2.2.4 3.2.2.5 3.2.2.6 3.5.5.1 3.5.6.2</p>
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TERM 3		
Mental Mathematics	<p>Mental calculations involving:</p> <ul style="list-style-type: none"> • Addition and subtraction facts for: <ul style="list-style-type: none"> ❖ Units ❖ Multiples of 10 ❖ Multiples of 100 ❖ Multiples of 1 000 • Multiplication of whole numbers to at least 10×10 • Multiplication facts for: <ul style="list-style-type: none"> ❖ Units by multiples of 10 ❖ Units by multiples of 100 <p>Number range for counting, ordering, comparing and representing, and place value of digits</p> <ul style="list-style-type: none"> • Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s, 100s between 0 and at least 10 000 • Order, compare and represent numbers to at least 4-digit numbers • Represent odd and even numbers to at least 1 000 • Recognize the place value of digits in whole numbers to at least 4-digit numbers • Round off to the nearest 10, 100 and 1 000 • <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Rounding off and compensation • Doubling and halving • Using a number line • Using addition and subtraction as 	Same as Term 1



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	<p>inverse operations</p> <ul style="list-style-type: none"> Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers.</p>	
<p>4.3 Capacity / Volume</p>	<p>Practical measuring of 3D objects by:</p> <ul style="list-style-type: none"> Estimating Measuring Recording Comparing and ordering <p>Measuring instruments Measuring spoon, measuring cup, measuring jug</p> <p>Units Milliliter (ml), liter (l)</p> <p>Calculations and problem solving related to capacity / volume include:</p> <ul style="list-style-type: none"> Solve problems in contexts using capacity Convert between liters and milliliters limited to examples of whole numbers and fractions 	<p>3.8.6.3 9.1.3.4 9.5.1.4</p>
<p>1.2 Common fractions</p>	<p>Solving problems</p> <ul style="list-style-type: none"> Solve problems in contexts involving fractions, including grouping and equal sharing <p>Describing and ordering fractions</p> <ul style="list-style-type: none"> Compare and order common fractions with different denominators 	<p>3.8.2.5 2.1.1.3 2.1.1.4 2.1.1.5 2.1.1.7 2.1.2.5 2.1.2.6</p>



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	<p>(halves, thirds, quarters, fifths, sixths, sevenths, eights)</p> <ul style="list-style-type: none"> Describe and compare common fractions in diagram form <p>Calculations with fractions</p> <ul style="list-style-type: none"> Addition and subtraction with same denominators Recognize, describe and use the equivalence of division and fractions <p>Equivalent fractions</p> <ul style="list-style-type: none"> Recognize and use equivalent forms of common fractions (denominators which are multiples of each other) 	<p>2.2.2.2 3.4.5.1 3.4.6.1</p> <p>2.1.4.1 2.1.4.2 2.1.4.5 2.1.4.6 2.1.5.1 2.1.5.4</p>
<p>1.1 Whole numbers</p>	<p>Number range for counting, ordering, comparing, representing and place value of digits</p> <ul style="list-style-type: none"> Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s and 100s between 0 and at least 10 000 Order, compare and represent numbers to at least 4-digit numbers Represent odd and even numbers to at least 1 000 Recognize the place value of digits in whole numbers to at least 4-digit numbers Round off to the nearest 10, 100 and 1 000 	<p>1.1.2.7 1.1.2.8 1.1.8.2 1.1.8.3 1.1.8.4 1.1.8.9 1.1.9.3 1.1.9.4 1.1.9.7 1.1.9.8 1.1.10.3 1.7.8.4 1.7.9.2</p>
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculation Addition and subtraction of whole numbers to at least 4 digits</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including:</p>	<p>1.2.6.6 1.2.6.7 1.2.7.4 1.2.7.5 1.3.7.2 1.3.8.1 1.3.8.2</p>



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	<ul style="list-style-type: none"> ❖ Estimation ❖ Building up and breaking down numbers ❖ Rounding off and compensation ❖ Doubling and halving ❖ Using a number line ❖ Using addition and subtraction as inverse operations ❖ Using multiplication and division as inverse operations <p>Properties of whole numbers Recognize and use the commutative and associative properties of whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p>	<p>1.3.8.3 1.3.8.4 1.7.6.5</p> <p>1.8.8.4 1.8.8.5 1.8.8.6 1.8.8.7</p> <p>3.8.4.6 3.8.4.7</p>
<p>3.5 Viewing objects</p>	<p>Position and views Match different views of everyday objects Identify everyday objects from different views</p>	<p>8.1.2.8</p>
<p>3.1 Properties of 2D shapes</p>	<p>Shapes learners need to know and name:</p> <ul style="list-style-type: none"> • Regular and irregular polygons: <ul style="list-style-type: none"> ❖ Triangles ❖ Squares, rectangles ❖ Other quadrilaterals ❖ Pentagons ❖ Hexagons • Circles <p>The characteristics which learners use to distinguish, describe, sort and compare shapes</p> <ul style="list-style-type: none"> • Straight and/curved sides • Number of sides <p>Further activities to focus on the characteristics of shapes</p>	<p>8.1.1.4 8.1.1.2 8.1.1.5</p>



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	Draw 2D shapes on grid paper	
5.1 Collecting and organizing data	Collect data using tally marks and tables for recording	10.1.1.2 10.1.1.3
5.2 Representing data	Draw a variety of graphs to display and interpret data including: <ul style="list-style-type: none"> • Pictographs (one-to-one representation) • Bar graphs 	10.1.2.1 10.1.2.2 10.1.2.4
5.3 Analyzing, interpreting and reporting data	Critically read and interpret data represented in <ul style="list-style-type: none"> • Words • Pictographs • Bar graphs • Pie graphs Analyze data by answering questions related to data categories Summarize data verbally and in short written paragraphs	10.1.4.1
2.1 Numeric patterns	Investigate and extend patterns <ul style="list-style-type: none"> • Investigate and extend numeric patterns looking for relationships or rules of patterns: <ul style="list-style-type: none"> ❖ Sequences involving a constant difference or ratio ❖ Of learner's own creation • Describe observed relationships or rules in learner's own words Input and output values Determine input values, output values and rules for patterns and relationships using flow diagrams Equivalent forms Determine equivalence of different descriptions of the same relationship or rule presented: <ul style="list-style-type: none"> • Verbally 	3.2.5.1 3.2.5.2



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	<ul style="list-style-type: none"> • In a flow diagram • By a number sentence 	
<p>1.1 Whole numbers Addition and subtraction</p>	<p>Number range for calculation Addition and subtraction of whole numbers to at least 4 digits</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> ❖ Estimation ❖ Building up and breaking down numbers ❖ Rounding off and compensation ❖ Doubling and halving ❖ Using a number line ❖ Using addition and subtraction as inverse operations ❖ Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative and associative properties of whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts</p>	<p>1.2.6.6 1.2.6.7 1.2.7.4 1.2.7.5 1.3.7.2 1.3.8.1 1.3.8.2 1.3.8.3 1.3.8.4 1.7.6.5 1.8.8.4 1.8.8.5 1.8.8.6 1.8.8.7 1.7.7.1 1.7.7.6 3.8.4.6 3.8.4.7</p>
<p>1.1 Whole numbers Multiplication</p>	<p>Number range for calculations Multiplication of at least whole 2-digit by 2-digit numbers</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p>	<p>1.4.1.10 1.4.1.6 1.4.1.8 1.4.1.9 1.4.2.1 1.4.2.2 1.4.2.3 1.4.2.6</p>



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	<ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Rounding off and compensating • Doubling and halving <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers</p> <p>Solving problems Solve problems in contexts involving whole numbers, including</p> <ul style="list-style-type: none"> • Financial contexts • Measurement contexts <p>Solve problems involving whole numbers, including</p> <ul style="list-style-type: none"> • Comparing two or more quantities of the same kind (ratio) • Comparing two quantities of different kinds (rate) 	<p>1.4.2.7 1.4.2.8 1.4.2.9 1.4.3.1 1.4.3.2 1.4.4.1 1.4.4.2 1.4.6.1 1.4.6.2 1.4.6.3 1.4.6.4 1.4.6.5 3.1.3.1 3.1.3.2 3.1.3.3 3.2.2.2 3.2.2.3 3.6.4.3 3.6.5.3 3.6.6.3 3.7.3.3 3.7.4.3 3.8.7.1</p>
<p>2.3 Number sentences</p>	<p>Number sentences</p> <ul style="list-style-type: none"> • Write number sentences to describe problem situations • Solve and complete number sentences by <ul style="list-style-type: none"> ❖ Inspection ❖ Trial and improvement • Check the solution by substitution 	
<p>3.4 Transformations</p>	<p>Build composite shapes Put 2D shapes together to create different composite 2D shapes including some shapes with line symmetry</p> <p>Tessellations</p>	<p>Classroom activity</p>



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	<p>Pack out 2D shapes to create tessellation patterns including some patterns with line symmetry</p> <p>Describe patterns Refer to lines, 2D shapes, 3D objects and lines of symmetry when describing patterns</p> <ul style="list-style-type: none">• In nature• From modern everyday life• Our cultural heritage	
TERM 4		
Mental Mathematics	<p>Mental calculations involving:</p> <ul style="list-style-type: none">• Addition and subtraction facts for:<ul style="list-style-type: none">❖ Units❖ Multiples of 10❖ Multiples of 100❖ Multiples of 1 000• Multiplication of whole numbers to at least 10×10• Multiplication facts for:<ul style="list-style-type: none">❖ Units by multiples of 10❖ Units by multiples of 100 <p>Number range for counting, ordering, comparing and representing, and place value of digits</p> <ul style="list-style-type: none">• Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s, 100s between 0 and at least 10 000• Order, compare and represent numbers to at least 4-digit numbers• Represent odd and even numbers to at least 1 000• Recognize the place value of digits in whole numbers to at least 4-digit numbers• Round off to the nearest 10, 100 and 1 000 <p>Calculation techniques</p>	Same as Term 1



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	<p>Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Rounding off and compensation • Doubling and halving • Using a number line • Using addition and subtraction as inverse operations • Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers.</p>	<p>3.5.6.1 3.5.6.2 3.5.6.3</p>
<p>1.1 Whole numbers</p>	<p>Number range for counting, ordering, comparing, representing and place value of digits</p> <ul style="list-style-type: none"> • Count forwards and backwards in 2s, 3s, 5s, 10s, 25s, 50s and 100s between 0 and at least 10 000 • Order, compare and represent numbers to at least 4-digit numbers • Represent odd and even numbers to at least 1 000 • Recognize the place value of digits in whole numbers to at least 4-digit numbers • Round off to the nearest 10, 100 and 1 000 	<p>1.1.2.7 1.1.2.8 1.1.8.2 1.1.8.3 1.1.8.4 1.1.8.9 1.1.9.3 1.1.9.4 1.1.9.7 1.1.9.8 1.1.10.3 1.7.8.4 1.7.9.2</p>
<p>1.1 Whole numbers Addition and</p>	<p>Number range for calculation Addition and subtraction of whole numbers to at least 4 digits</p>	<p>1.2.6.6 1.2.6.7 1.2.7.4</p>



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<p>subtraction</p>	<p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> ❖ Estimation ❖ Building up and breaking down numbers ❖ Rounding off and compensation ❖ Doubling and halving ❖ Using a number line ❖ Using addition and subtraction as inverse operations ❖ Using multiplication and division as inverse operations <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative and associative properties of whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p>	<p>1.2.7.5 1.3.7.2 1.3.8.1 1.3.8.2 1.3.8.3 1.3.8.4 1.7.6.5</p> <p>1.8.8.4 1.8.8.5 1.8.8.6 1.8.8.7</p> <p>3.8.4.6 3.8.4.7</p>
<p>4.2 Mass</p>	<p>Practical measuring of 3D objects by:</p> <ul style="list-style-type: none"> • Estimation • Measuring, recording • Comparing and ordering • 3D objects using mass <p>Measuring instruments Bathroom scales, kitchen scales and balance scales</p> <p>Units Grams(g) and kilograms(kg)</p> <p>Calculations and problem solving with mass</p>	<p>3.8.6.2 9.1.3.2 9.1.3.3 9.1.2.2 9.1.2.3</p>



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	include Problems in contexts with mass converting between grams and kilograms limited to examples with whole numbers and fractions	
3.2 Properties of 3D objects	Objects which learners need to know and name <ul style="list-style-type: none">• Rectangular prisms• Spheres• Cylinders• Cones• Square-based pyramids The characteristics which learners use to distinguish, describe, sort and compare objects <ul style="list-style-type: none">• Shapes of faces• Flat and curved surfaces Further activities to focus learners on characteristics of objects Make 3D models using cut-out polygons	8.1.2.2
1.2 Common fractions	Solving problems Solving problems in contexts involving fractions, including grouping and equal sharing Describing and ordering fractions <ul style="list-style-type: none">• Compare and order common fractions with different denominators (halves, thirds, quarters, fifths, sixths, sevenths, eights)• Describe and compare common fractions in diagram form Calculations with fractions <ul style="list-style-type: none">• Addition of common fractions with the same denominators• Recognize, describe and use the equivalence of division and fractions	2.1.1.3 2.1.1.4 2.1.1.5 2.1.1.7 2.1.2.2 2.1.2.5 2.1.2.6



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	<p>Equivalent forms Recognize and use equivalent forms of common fractions with denominators which are multiples of each other</p>	<p>2.1.4.2 2.1.5.1 2.1.5.4</p>
<p>1.1 Whole numbers Division</p>	<p>Number range for calculations</p> <ul style="list-style-type: none"> • Division of at least whole 3-digit by 1-digit numbers <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including</p> <ul style="list-style-type: none"> • Estimation • Building up and breaking down numbers • Rounding off and compensation • Doubling and halving • Using a number line • Using addition and subtraction as inverse operations • Using multiplication and division as inverse operations <p>Properties of whole numbers Recognize and use the commutative, associative and distributive properties of whole numbers.</p> <p>Solving problems</p> <ul style="list-style-type: none"> • Solve problems in contexts involving whole numbers: <ul style="list-style-type: none"> ❖ Financial contexts ❖ Measurement contexts • Solve problems involving whole numbers, including <ul style="list-style-type: none"> ❖ Grouping and equal sharing with remainders ❖ Comparing two or more quantities of the same kind (ratio) 	<p>1.5.1.3 1.5.1.5 1.5.1.6 1.5.1.9 1.5.3.1 1.5.3.2 1.5.3.3 1.5.3.4 1.5.3.5 1.5.3.6 1.5.4.1 1.5.4.2 1.5.4.3 1.5.4.4 3.1.4.1 3.1.4.2 3.1.4.3 3.2.2.4 3.2.2.5 3.2.2.6 3.5.5.1 3.5.6.2</p>



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	❖ Comparing two quantities of different kinds(rate)	
4.6 Perimeter, area and volume	Perimeter Measure perimeter using rulers or measuring tapes Measurement of area Find areas of regular and irregular shapes by counting squares on grids in order to develop an understanding of square units Measurement of volume Find volume / capacity of objects (by packing or filling them in order to develop an understanding of cubic units)	9.3.1.2 9.3.1.5 9.3.2.1 9.3.2.2 9.5.1.3
3.6 Position and movement	Location and direction Locate position of objects, drawings or symbols on grid using alpha-numeric grid references. Locate positions of objects on a map using alpha-numeric grid references.	9.6.1.1 9.6.1.2 9.6.1.3
3.4 Transformations	Build composite shapes Put 2D shapes together to create different composite 2D shapes including some shapes with line symmetry Tessellations Pack out 2D shapes to create tessellation patterns including some patterns with line symmetry Describe patterns Refer to lines, 2D shapes, 3D objects and lines of symmetry when describing patterns <ul style="list-style-type: none">• In nature• From modern everyday life• Our cultural heritage	Class activity



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<p>2.2 Geometric patterns</p>	<p>Investigate and extend patterns</p> <ul style="list-style-type: none"> • Investigate and extend geometric patterns looking for relationships or rules of patterns <ul style="list-style-type: none"> ❖ Represented in physical or diagram form ❖ Sequences involving a constant difference or ratio ❖ Of learner's own creation • Describe observed relationships or rules in learner's own words <p>Input and output values</p> <ul style="list-style-type: none"> • Determine input values, output values and rules for the patterns and relationships using flow diagrams <p>Equivalent forms</p> <ul style="list-style-type: none"> • Determine equivalence of different descriptions of the same relationship or rule presented • Verbally • In a flow diagram • By a number sentence 	<p>4.1.1.5</p>
<p>1.1 Whole numbers Addition and Subtractions</p>	<p>Number range for calculation Addition and subtraction of whole numbers to at least 4 digits</p> <p>Calculation techniques Use a range of techniques to perform and check written and mental calculations of whole numbers including:</p> <ul style="list-style-type: none"> ❖ Estimation ❖ Building up and breaking down numbers ❖ Rounding off and compensation ❖ Doubling and halving ❖ Using a number line ❖ Using addition and subtraction as inverse operations 	<p>1.2.6.6 1.2.6.7 1.2.7.4 1.2.7.5 1.3.7.2 1.3.8.1 1.3.8.2 1.3.8.3 1.3.8.4 1.7.6.5</p>



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	<p>❖ Using multiplication and division as inverse operations</p> <p>Number range for multiples and factors Multiples of 1-digit numbers to at least 100</p> <p>Properties of whole numbers Recognize and use the commutative and associative properties of whole numbers.</p> <p>Solving problems Solve problems in contexts involving whole numbers, including financial contexts.</p>	<p>1.8.8.4 1.8.8.5 1.8.8.6 1.8.8.7 3.8.4.6 3.8.4.7</p>
<p>5.4 Probability</p>	<p>Perform simple repeated events and list possible outcomes for events such as:</p> <ul style="list-style-type: none">• Tossing a coin• Rolling a die	<p>10.2.1.3</p>

