Wk	Objective	Strands	Milestone 3	Basic	Advance	Deep
1	To know and use numbers	Counting	• Read numbers up to 10 000 000. • Use negative numbers in context and calculate intervals across zero.	With the support of a teacher, numbers up to 1 000 000 can be read.	With reminders, numbers up to 10 000 000 can be read.	Numbers up to 10 000 000 can be read independently.
			• Use negative numbers in context and calculate intervals across zero.	• With the support of a teacher and with concrete objects if necessary, intervals across zero are calculated.	• Generally, negative numbers in contexts are used and intervals across zero are calculated.	• Negative numbers in context are used and intervals across zero are calculated independently.
		Representing	• Write numbers up to 10 000 000 Order and compare numbers up to 10 000 000.	• With the support of a teacher, numbers up to 1 000 000 can be written.	• Generally, numbers up to 10 000 000 can be written.	• Numbers up to 10 000 000 are independently and accurately written.
		Comparing	Order and compare numbers up to 10 000 000.	With the support of a teacher, numbers up to 1 000 000 can be ordered using the first three digits. • Numbers up to 1 000 000 are compared using the first three digits of the number	• With reminders, numbers up to 10 000 000 can be ordered using all digits. Numbers up to 10 000 000 are generally compared using all digits.	Numbers up to 10 000 000 and beyond can be quickly ordered independently. Numbers up to 10 000 000 are quickly ordered independently. • Explanations of methods are provided.
		Solving problems	• Solve number and practical problems.	A wide variety of practical problems and number problems, using all four operations, are solved with the support of a teacher. With the support of a teacher or when prompts are given, problems can be described and articulated and equipment to solve the problem can be chosen.	Using all four operations, a wide variety of practical problems and number problems can generally be solved. Information that is important for solving problems is identified. Questions about a problem can be asked and answered independently.	A wide variety of practical problems and number problems, using all four operations, are solved. Several-step problems can be broken down into simpler steps. Efficient methods, based on previous problems, are used.

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				When prompts or guidance are given, patterns can be identified in results. With reminders, answers are checked and corrections are made.	Approaches to problem solving are reviewed and improved for next time. • Generally, answers are checked and corrections are made.	Results are checked to ensure that they are reasonable and, as a result of this, any errors found are corrected. Work from start to finish is organised in a systematic way. • Answers are justified and methods explained.
2	To know and use numbers	Representing	• Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	With reminders, Roman numerals to 100 (I to C) are read and written. • With the support of a teacher Roman numerals to 1000 (M) are recognised.	Generally, Roman numerals are read up to 1000 (M). • With support, years written in Roman form are beginning to be deciphered.	Roman numerals are read beyond 1000 (M) and years written in Roman form are deciphered. • Explanations of methods are provided.
		Place value	• Round any whole number to a required degree of accuracy.	• With support, any whole number can be rounded to the nearest 10, 100, 1000, 10, 000 and 1 000 000.	Generally, any whole number can be rounded to any degree of accuracy.	Any whole number can be rounded to a required degree of accuracy. • Rounding is used to check, explain and justify answers to calculations.
			• Determine the value of each digit in any number.	The value of each digit in six-digit whole numbers is identified with support. • With the support of a teacher and pictorial representations, the value of each number in larger whole numbers is identified.	Generally, the value of each digit in any whole number up to seven-digit numbers, is identified. • When reminders are given, the value of each digit in a number with up to three decimal places is identified.	The value of each digit in any whole number is identified independently. • The value of each digit in any number with up to four decimal places is identified.
		Solving problems	• Solve number and practical problems.	A wide variety of practical problems and number problems, using all four operations, are solved with the support of a teacher.	Using all four operations, a wide variety of practical problems and number problems can generally be solved.	A wide variety of practical problems and number problems, using all four operations, are solved.

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				With the support of a teacher or when prompts are given, problems can be described and articulated and equipment to solve the problem can be chosen. When prompts or guidance are given, patterns can be identified in results. With reminders, answers are checked and corrections are made.	Information that is important for solving problems is identified. Questions about a problem can be asked and answered independently. Approaches to problem solving are reviewed and improved for next time. • Generally, answers are checked and corrections are made.	Several-step problems can be broken down into simpler steps. Efficient methods, based on previous problems, are used. Results are checked to ensure that they are reasonable and, as a result of this, any errors found are corrected. Work from start to finish is organised in a systematic way. • Answers are justified and methods explained.
3	To add and subtract	Complexity	• Solve multi-step addition problems in contexts, deciding which operations and methods to use and why.	• With the support of a teacher, multi-step addition and subtraction problems can be broken down into steps and solved.	Generally, multi-step addition and subtraction problems are broken down into steps and solved. • Mistakes may still occur when independently solving multi-step problems, due to confusing which operation to use when solving a problem.	Independently, a variety of multi-step addition and subtraction problems are answered correctly. The context of the problem does not confuse and problems in contexts are answered correctly, e.g. multi-step problems involving measures, missing numbers, etc.
		Methods	• Add whole numbers with more than 4 digits, including using formal written methods. (columnar addition)	With the support of a teacher, four-digit whole numbers can be added and subtracted using formal written methods.	• With the exception of occasional mistakes, whole numbers with four digits can be added and subtracted correctly using formal written methods.	• Independently, whole numbers with more than four digits are added and subtracted, using formal written methods correctly.
			• Add numbers mentally with increasingly large numbers.	• Mental strategies are developing for mental calculations of simpler addition and subtraction problems.	Mental strategies are developing to increase speed during adding and subtracting mentally for problems involving two whole numbers with three digits, e.g. 323 + 356 = 679	Mental strategies to answer calculations, involving adding and subtracting more than two whole numbers, with more than three digits, are developing. • Mental calculations involving

Wk	Objective	Strands	Milestone 3	Basic	Advance	Deep
						increasingly large numbers are solved accurately.
4		Complexity	• Solve multi-step subtraction problems in contexts, deciding which operations and methods to use and why.	• With the support of a teacher, multi-step addition and subtraction problems can be broken down into steps and solved.	Generally, multi-step addition and subtraction problems are broken down into steps and solved. • Mistakes may still occur when independently solving multi-step problems, due to confusing which operation to use when solving a problem.	Independently, a variety of multi-step addition and subtraction problems are answered correctly. The context of the problem does not confuse and problems in contexts are answered correctly, e.g. multi-step problems involving measures, missing numbers, etc.
		Methods	• Subtract whole numbers with more than 4 digits, including using formal written methods. (columnar subtraction)	With the support of a teacher, four-digit whole numbers can be added and subtracted using formal written methods.	• With the exception of occasional mistakes, whole numbers with four digits can be added and subtracted correctly using formal written methods.	• Independently, whole numbers with more than four digits are added and subtracted, using formal written methods correctly.
			• Subtract numbers mentally with increasingly large numbers.	• Mental strategies are developing for mental calculations of simpler addition and subtraction problems.	Mental strategies are developing to increase speed during adding and subtracting mentally for problems involving two whole numbers with three digits, e.g. 323 + 356 = 679	Mental strategies to answer calculations, involving adding and subtracting more than two whole numbers, with more than three digits, are developing. • Mental calculations involving increasingly large numbers are solved accurately.
5		Using number facts	• Add and subtract negative integers.	With the support of a teacher and the use of practical contexts, such as number temperature, negative numbers can be added and subtracted. • With the support of a teacher, there is counting through 0.	• Negative integers are added and subtracted; however, reminders or practical contexts to support understanding may be necessary.	There is an understanding when adding and subtracting negative integers that: - Two unlike signs become a negative sign, e.g.: 8 (+2) = 8 2 = 6 7 + (2) = 7 2 = 5 --- Two like signs become

Wk	Objective	Strands	Milestone 3	Basic	Advance	Deep
						a positive sign, e.g.: --- 6 (3) = 6 + 3 = 9
		Complexity	• Solve multi-step addition and subtraction problems in contexts, deciding which operations and methods to use and why.	• With the support of a teacher, multi-step addition and subtraction problems can be broken down into steps and solved.	Generally, multi-step addition and subtraction problems are broken down into steps and solved. • Mistakes may still occur when independently solving multi-step problems, due to confusing which operation to use when solving a problem.	Independently, a variety of multi-step addition and subtraction problems are answered correctly. The context of the problem does not confuse and problems in contexts are answered correctly, e.g. multi-step problems involving measures, missing numbers, etc.
6	To multiply and divide	Using multiplication and division facts	• Identify common factors, common multiples and prime numbers.	With support, knowledge of the multiplication tables is used to identify common factors and common multiples. • There is an awareness of the terminology prime number and its meaning as whole numbers greater than 1 that have no positive divisors other than 1 and itself.	Generally, common factors, common multiples are identified. • Generally prime numbers are understood and identified.	Common factors, common multiples are identified independently. There is an understanding that the number 2 is the only even prime number.
			• Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	Generally whole numbers are multiplied and divided by 10 or 100 independently. • With the support of a teacher and apparatus, such as a place value grid, decimals up to one decimal pace can be multiplied and divided by 10 or 100.	With reminders, multiplication and division questions involving multiples of 10, 100, 1000, etc. are answered correctly. Generally, decimal numbers are multiplied and divided by 10, 100 and 1000.	Multiplication and division questions involving multiples of 10, 100, 1000, 10 000, 100 000, etc. are answered correctly and at speed. Decimal numbers are multiplied and divided by 10, 100, 1000 and 10 000 independently.
			• Establish whether a number up to 100 is prime and recall prime numbers up to 19.	• With support, the prime numbers 2, 3, 5, 7,11, 13, 17, 19 are recalled. • With support prime numbers up to 100 are identified.	Generally, prime numbers up to 19 are recalled at an increasing speed. • Generally. prime numbers up to 100 are recognised.	Prime numbers up to 19 are recalled at speed. • Prime numbers up to 100 are recognised.

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7			Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).	There is an emerging understanding of square number and cube numbers and the notion for both of these (^{2} and ^{3}).	Generally, there is a secure understanding that a square number is an integer multiplied by itself and the notation for this is $^{2.}$ • There is an emerging understanding of cubed numbers being an integer multiplied by itself twice and that the notation for this is ^{3}.	• There is a secure understanding of square and cubed numbers and the notation for both (^{2} and ^{3}).
			Solve problems involving multiplication and division including using knowledge of factors and multiples, squares and cubes.			
		Checking	Estimate and use inverse operations and rounding to check answers to a calculation.	• With the support of a teacher, estimation and the inverse relationship between multiplication and division is used to check the answers to a calculation.	Generally, the inverse relationship between multiplication and division can be used to check answers. When prompts are provided, estimations and rounding are used to check answers to a calculation.	The inverse relationship between multiplication and division is used to check answers to a calculation. • Estimating and rounding is a strategy confidently used to check answers to a calculation independently.
8		Methods	• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.	• With support, numbers up to 4 digits by a two-digit whole number using the formal written method for multiplication.	• Generally, numbers up to 4 digits by a two-digit whole number using the formal written method for multiplication. • With reminders, mistakes are identified and corrected.	• Independently, numbers up to 4 digits by a two-digit whole number using the formal written method for multiplication. • Mistakes are uncommon but are identified and corrected independently.
			Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or	• With support, long division is undertaken. • With support remainders are explained in terms of the context.	• Generally long division is understood and used correctly. • Remainders are generally accurately interpreted.	• The situation for using long division is understood and chosen where appropriate. • Long division is accurate and remainders fully understood

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			by rounding, as appropriate for the context.			according to the context.
			Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	• With support, short division is undertaken. • With support remainders are explained in terms of the context.	• Generally short division is understood and used correctly. • Remainders are generally accurately interpreted.	The situation for using short division is understood and chosen where appropriate. • Short division is accurate and remainders fully understood according to the context.
			• Perform mental calculations, including with mixed operations and large numbers.	• Mental strategies are developing in order to answer mental calculations, including with mixed operations, • e.g. 5 x 3 + 6 = 21	Strategies to solve mental calculations, including with mixed operations and large numbers are developed and applied. Answers are generally correct. Multiplication and division questions involving multiples of 10, 100, 1000, etc. are answered by using times table facts, e.g. 6 x 6 = 36, so 60 x 6 = 360 • Simple decimals can be multiplied by a one-digit number.	Multiplication and division questions involving multiples of 10, 100, 1000, 10 000, etc. are answered by using times table facts, e.g. 6 x 6 = 36 so, 60 x 6 = 360 Multiplication and division facts for multiplication tables up to 12 12 can be recalled. Mental strategies to solve complex calculations are developed and utilised in contexts confidently, e.g. checking answers or estimating. Mental calculations, including with mixed operations and large numbers, can be performed quickly and with accuracy. • Decimals can be multiplied or divided by one-digit numbers mentally and using formal written methods.
		Checking	• Estimate and use inverse operations and rounding to check answers to a calculation.	• With the support of a teacher, estimation and the inverse relationship between multiplication and division is used to check the answers to a calculation.	Generally, the inverse relationship between multiplication and division can be used to check answers.	The inverse relationship between multiplication and division is used to check answers to a calculation.

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					When prompts are provided, estimations and rounding are used to check answers to a calculation.	• Estimating and rounding is a strategy confidently used to check answers to a calculation independently.
9	Fractions (including decimals, percentages, ratio and proportion)	Recognising fractions	• Compare and order fractions whose denominators are all multiples of the same number.	With support fractions with the same denominators are ordered. With the support of a teacher, pictorial representations and concrete objects, fractions whose denominators are all multiples of the same number are ordered.	Generally, fractions whose denominators are all multiples of the same number are ordered and compared.	Fractions whose denominators are all multiples of the same number are ordered independently and at speed.
			• Compare and order fractions, including fractions > 1.	• With support, fractions >1 are ordered.	• Generally fractions > 1 are ordered.	• Fractions >1 are ordered independently and at speed.
			• Round decimals with two decimal places to the nearest whole number and to one decimal place.	With prompts, decimals with one decimal place are rounded to the nearest whole number.	Generally, decimals with two decimal places are rounded to the nearest whole number. Generally decimals with two decimal places are rounded to one decimal place.	Decimals with up to three decimal places can be rounded to the nearest whole number. Decimals with up to three decimal places can be rounded to one decimal places.
			• Read, write, order and compare numbers with up to three decimal places.	With the support of a teacher, problems involving numbers up to three decimal places are solved.	With reminders, numbers with up to three decimal places can be read, written and ordered.	Numbers with up to three decimal places can be read, written and ordered.
			• Identify the value of each digit in numbers given to three decimal places.	With support, the value of each digit in numbers given to three decimal places, is identified.	Generally, the value of each digit in numbers given to three decimal places, is identified.	Independently, the value of each digit in numbers given to three decimal places is identified.
11			Solve problems involving number up to three decimal places.	• With support, problems involving up to three decimal places are undertaken.	When reminders are given, problems involving number up to three decimal places are solved.	Problems involving numbers up to three decimal places are solved independently.
			Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number.	With support fractions, including mixed fractions, e.g. 1 , 3 , etc. are compared and ordered. • With support numbers are converted between mixed	Generally, fractions, including mixed fractions, e.g. 1 , 3 , etc. are compared and ordered. Numbers are converted between mixed numbers and improper	Numbers are converted between mixed numbers and improper fractions independently.

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				numbers and improper fractions.	fractions with prompts or reminders if necessary.	
			• Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.	There is an emerging understanding that the term per cent relates to 'number of parts per hundred'. With the support of a teacher percentages can be written as a fraction with denominator 100 and a decimal.	The per cent symbol (%) is understood and related to 'number of parts per hundred'. • Percentages as a fraction with denominator 100 and as a decimal are written, e.g. 30/100 = 30% = 0.30.	Percentages as a fraction with denominator 100 and as a decimal are written, e.g. 43/100 = 43%. Percentage values of a given value or quantity can be identified and solved, even when the percentage is complex, e.g. 16% of 96 = 15.36.
12		Equivalence	• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.	Generally, 0.5, 0.25 and 0.75 can be written and read as a fraction.	Generally, equivalent fractions of a given fraction are identified, named and written. With more complex fractions, visual prompts or reminders may be needed.	Equivalent fractions including tenths and hundredths are independently identified, named and written.
			Read and write decimal numbers as fractions.	• With the support of a teacher, common decimal numbers, 0.5, 0.1– 0.9, 0.25 and 0.75, can be converted into fractions.	Common decimal numbers, 0.5, 0.1– 0.9, 0.25 and 0.75, can be converted into fractions with reminders if necessary.	Decimal numbers, including 0.33 and 0.66 can be converted into fractions.
			Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	Tenths are recognised in a number, with prompts where necessary. With support, tenths and hundredths are recognised in a number.	Thousandths are recognised in numbers up to three decimal places when prompts are given. Generally, thousandths can be related to tenths, hundredths and decimal equivalents.	Equivalent fractions of a given fraction, including tenths and hundredths can be identified, named and written independently. Thousandths can be related to tenths, hundredths and decimal equivalents independently.
13			Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.	With support, fractions can be simplified to express fractions in the same denomination.	Generally, fractions can be reduced to their simplest form by cancelling common factors and to express fractions in the same denomination.	Fractions can be reduced to their simplest form by cancelling common factors and to express fractions in the same denomination without support.
			• Associate a fraction with division and calculate decimal fraction equivalents.	• With support, numerators are divided by denominators to provide decimal fraction	• Generally, numerators are divided by denominators to provide decimal fraction	• Independently numerators are divided by denominators to provide decimal fraction

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				equivalents.	equivalents.	equivalents in a range of contexts.
			• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	With prompts and support, equivalences between fractions: 1, 1/2, 1/4, 2/4, 3/4; decimals: 1, 0.5, 0.25, 0.75 and percentages: 100%, 50%, 25%, 75% are recalled and used.	• Generally, equivalence between most fractions, decimals and percentages are recalled and used in a number of contexts.	Equivalence between most fractions, decimals and percentages are recalled and used independently in a number of contexts.
14		Solving problems	• Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	With support, fractions with the same denominator are added and subtracted. With support, denominators that are multiples of the same number are added and subtracted independently, e.g. 1/3 + 2/6 = 2/3.	Generally, fractions with the same denominator are added and subtracted. • Generally, denominators that are multiples of the same number are added and subtracted independently, e.g. 1/3 + 2/6 = 2/3.	Fractions with the same denominator are added and subtracted fluently and accurately. Denominators that are multiples of the same number are added and subtracted independently.
			• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.	• With support, fractions with different denominators and mixed numbers can be added and subtracted by using the concept of equivalent fractions.	When prompts are provided, fractions with different denominators and mixed numbers can be added and subtracted by using the concept of equivalent fractions.	Fractions with different denominators can be ordered and decimals that have a mixture of one, two or three decimal places can be ordered independently. Fractions with different denominators and mixed numbers are added and subtracted independently.
15			• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	With the support of a teacher and other materials and diagrams, proper fractions can be multiplied by whole numbers.	Generally, proper fractions and mixed numbers can be multiplied by whole numbers using materials and diagrams.	Independently, proper fractions and mixed numbers are multiplied by whole numbers and simple pairs of proper fractions are multiplied.
			• Multiply simple pairs of proper fractions, writing the answer in its simplest form.	With support, simple pairs of proper fractions can be multiplied, the answer being written in its simplest form.	Generally, simple pairs of proper fractions can be multiplied, the answer being written in its simplest form.	Simple pairs of proper fractions can be multiplied, the answer being written in its simplest form.
			• Solve problems which require knowing percentage and decimal equivalents of, 1/2, 1/4, 1/5,	• Simple equivalence between fractions, decimals and percentages, e.g. 1/4, 0.25 and	Simple equivalences between fractions, decimals and percentages, (for e.g. 1/4, 2/4, 1/3 and 1/2) can be used to solve	Problems are solved using more complex equivalences, such as 2/5 into decimals and percentages.

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			2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25	25% are recognised. Support from materials and diagrams may be necessary.	problems independently. Generally, problems which require knowing percentage and decimal equivalents of 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25, are solved.	
16			• Divide proper fractions by whole numbers.	With support, proper fractions can be divided by whole numbers.	Generally, proper fractions can be divided by whole numbers.	Proper fractions can be divided by whole numbers independently.
			• Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.	With support, numbers are multiplied by 10 100 and 1000. With the support of a teacher, numbers are divided by 10,100 and 1000 giving answers up to three decimal places.	Generally, numbers are multiplied by 10 100 and 1000. Generally, numbers are divided by 10,100 and 1000 giving answers up to three decimal places.	Numbers can be multiplied by 10 100 and 1000. Numbers are divided by 10,100 and 1000 giving answers up to three decimal places.
17			**Ratio and proportion** • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.	•	•	•
			Solve problems involving the calculation of percentages and the use of percentages for comparison.	• With support, problems involving the calculation of percentages are calculated. • With support, problems that involve calculating and comparing percentages are undertaken.	• Generally, problems involving the calculation of percentages are calculated. Generally, problems that involve calculating and comparing percentages are solved.	• Problems involving the calculation of percentages are calculated independently and accurately. Problems that involve calculating and comparing percentages are identified and solved independently.
18			• Solve problems involving similar shapes where the scale factor is known or can be found.			
			• Solve problems involving unequal sharing and grouping using knowledge of fractions and	Problems involving unequal sharing and grouping can be solved with the support of a	• Problems involving unequal sharing and grouping, using knowledge of fractions and	Problems are solved independently that involve the calculation of percentages and

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			multiples.	teacher or practical apparatus.	multiples, can be solved.	unequal sharing and grouping of fractions and multiples.
19	To understand the properties of shapes		• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	• When reminders are given, 3-D shapes are identified from 2-D representations.	• Generally, 3-D shapes are identified from 2-D representations.	• 3-D shapes are identified from 2-D representations. • When presented with a range of 2-D representations, those that represent 3-D shapes are sorted from those that do not.
			• Recognise, describe and build simple 3-D shapes, including making nets.			
			• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.	With support, it is understood that angles are measured in degrees. • With support, angles are estimated and compared and described as acute, obtuse or reflex angles.	Generally, is understood that angles are measured in degrees. Generally, acute, obtuse and reflex angles are estimated and compared.	It is understood that angles are measured in degrees. Acute, obtuse and reflex angles are estimated and compared.
			Draw given angles, and measure them in degrees (°).	With the support of a teacher, given angles can be drawn and measured.	Generally, given angles can be drawn and angles can be measured to the nearest 5° .	Given angles can be drawn and measured in ° accurately. • Reflex angles to the nearest degree, when neither edge is horizontal/vertical, can be measured and drawn without support.
20			• Identify: • Angles at a point and one whole turn (total 360°). • Angles at a point on a straight line and a turn (total 180°). • Other multiples of 90°.	With reminders, angles at a point and one whole turn (total 360°), angles at a point on a straight line and a turn (total 180°) are identified.	Generally, angles at a point and one whole turn (total 360°), angles at a point on a straight line and a turn (total 180°) and other multiples of 90°are identified.	Without support, angles at a point and one whole turn (total 360°), angles at a point on a straight line and a turn (total 180°) and other multiples of 90°are identified. Angles at a point, such as the angle between the hands of a clock, can be calculated. Triangles are constructed independently once information for the length of two sides and the

Wk	Objective	Strands	Milestone 3	Basic	Advance	Deep
						angle between the two sides is provided. Without support, missing angles in triangles and angles on a straight line can be calculated correctly.
			Recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles.	There is an emerging awareness of the terminology parallel and perpendicular.	Generally, angles on a straight line and missing angles in a triangle can be calculated. Different types of triangles (isosceles, right-angled, scalene and equilateral) are classified using properties such as length of sides and angles.	The terms parallel and perpendicular are used accurately when identifying properties of shapes.
21			• Use the properties of rectangles to deduce related facts and find missing lengths and angles	With support there is an understanding of the properties of a rectangle and this awareness is used to be able to find missing lengths.	Generally, the properties of a rectangle are used to be able to find missing lengths and angles.	• The properties of a rectangle are used to find missing lengths and angles. • The properties of rectangles and triangles are used to deduce related facts, including the area and perimeter of rectangles.
			• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	With support, simple properties, such as equal sides, are used to distinguish between regular and irregular polygons.	Generally, reasoning about equal sides and angles is used to distinguish between regular and irregular polygons.	Reasoning about equal sides and angles is used independently to distinguish between regular and irregular polygons.
			Draw 2-D shapes using given dimensions and angles.	With the support of a teacher, common 2-D shapes, such as rectangles, are drawn using given dimensions and angles.	Generally, 2-D shapes are drawn using given dimensions and angles.	• 2-D shapes are drawn independently using given dimensions and angles.
22			• Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.	Simpler geometric 2-D and 3-D shapes can be compared and classified.	Generally, geometric shapes can be compared and classified based on their properties and sizes, and unknown angles in any triangles, quadrilaterals and regular polygons can be found.	Geometric shapes can be compared and classified based on their properties and sizes and unknown angles in any triangles, quadrilaterals and regular polygons can be found independently.

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			• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.	There is an emerging understanding of the terminology radius, diameter and circumference. However, this vocabulary is not used independently.	With prompting, parts of circles can be illustrated and named using the terminology radius, diameter and circumference. • Generally, the terms parallel and perpendicular are understood.	Parts of circles can be illustrated and named using the terminology radius, diameter and circumference and there is understanding that the diameter is twice the radius.
23	To describe position, direction and movement		• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	With support, reflections of shapes can be drawn on a horizontal and vertical mirror line and, when modelling is provided, reflections of shapes can be drawn on a mirror line at 45° . There is an emerging understanding of the terminology reflection and translation.	Reflections of shapes can be drawn where the mirror line is at 45° and whether the shape is touching the line or not. When reminders are provided, a shape is rotated around its centre or vertex. Generally, shapes can be translated along an oblique line. Generally, the position of a shape following a reflection or translation is identified and described and there is an understanding that the shape has not changed.	Independently, a shape is rotated around its centre or vertex and through 90° or 180° , where the shape does not touch or cross the mirror line. Shapes can be translated along an oblique line without support. Lines of reflection symmetry in shape and diagrams can be found without support. The order of rotation symmetry can be recognised independently. Patterns that will occur on a net for a 3-D shape can be visualised. The position of a shape, following a reflection or translation, is identified, represented and described independently. Also, there is an understanding that the shape has not changed.
			• Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	2-D shapes can be drawn in different positions on a grid.	Simple shapes can be drawn and then translated on a coordinate plane.	More complicated shapes can be drawn and then translated on a coordinate plane.
24			Describe positions on the full coordinate grid. (all four quadrants)	• Positions on a coordinate grid, with two quadrants, are described.	With prompts, positions on the full coordinate grid (all four quadrants) are recognised and described.	Positions on the full coordinate grid (all four quadrants) are recognised and described without support.
25	To use	Converting	Understand and use approximate	With support, the equivalences	When reminders are provided, the	Independently, the equivalences

Wk	Objective	Strands	Milestone 3	Basic	Advance	Deep
	measures		equivalences between metric units and common imperial units such as inches, pounds and pints.	between metric units and common imperial units are understood.	equivalences between metric units and common imperial units are understood.	between metric units and common imperial units are understood and used.
			Convert between miles and kilometres.	With support, the conversion between miles and kilometres is calculated.	Generally, the conversion between miles and kilometres is calculated.	The conversion between miles and kilometres is calculated with speed.
			Convert between different units of metric measure.	With the support of a teacher, metric measures are converted between different units. • With reminders, measurements of length and distance are converted.	Generally, lengths can be measured using mm to within 2mm. • Generally, metric measures are converted between different units.	• Converting between different units of metric measure occurs confidently and is applied when solving problems.
26		Volume and capacity	• Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units	• There is an emerging awareness of the formula for the volume of cubes and cuboids (length x width x depth). These are calculated using standard units and recorded using cm^3 and m^3	• Generally, the the formula for the volume of cubes and cuboids (length x width x depth) is used to estimate and compare the volume of cubes and cuboids. These are calculated using standard units and recorded using cm^3 and m^3	• The volume of cubes and cuboids is calculated, estimated and compared correctly and accurately, using standard units. These are calculated using standard units and recorded using cm^3 and m^3
			Estimate volume and capacity.	With prompts, capacity can be estimated.	Capacity and volume can be estimated and are generally accurate.	Capacity and volume can be estimated and estimates are very close to the exact measure.
27		Perimeter and area	• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.		
			Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	With the support of a teacher and by using strategies such as counting squares inside a shape or finding the number of squares in a row and multiplying by the number of rows, the area of rectangles can be calculated using standard units – cm^2 and m^2.	The area of rectangles, including squares, can be calculated using standard units – cm^2 and m^2. When prompts are provided, the area of irregular shapes is estimated.	The area of irregular shapes and composite shapes can be calculated and estimated accurately and independently.

Wk	Objective	Strands	Milestone 3	Basic	Advance	Deep
28			Recognise that shapes with the same areas can have different perimeters and vice versa.	• With support, it is recognised that shapes with the same area can have different perimeters and vice versa.	• It is understood that shapes with the same area can have different perimeters and vice versa.	• Explanations and examples are provided to show that shapes with the same area can have different perimeters and vice versa.
			• Recognise when it is possible to use formulae for area and volume of shapes.	• With support, formulae for calculating the area and volume of shapes are used.	During problem-solving activities, it is recognised when it is possible to use formulae for the area of shapes.	The formulae for area and volume of shapes are recognised and used appropriately and accurately.
			• Calculate the area of parallelograms and triangles.	• With support, the formula A=1/2(b*h) where A= Area of triangle, b=length of base of triangle, h= length of height of triangle is used to calculate the area of a triangle. • With support, triangles are recognised as part of a parallelogram.	• Generally, the formula A=1/2(b*h) where A= Area of triangle, b=length of base of triangle, h= length of height of triangle is used to calculate the area of a triangle. • Generally, triangles are identified within parallelograms and used to calculate the area of a parallelogram.	• The formula A=1/2(b*h) where A= Area of triangle, b=length of base of triangle, h= length of height of triangle is used to calculate the area of a triangle. • Triangles are identified within parallelograms and used to calculate the area of a parallelogram.
29		Problem solving	Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.	With support are provided, measurements are converted between standard units of length, mass, volume and time (from a smaller unit to a larger unit, and vice versa). Decimal notation up to three decimal places is used, read and written.	When reminders are provided, measurements are converted between standard units of length, mass, volume and time (from a smaller unit to a larger unit, and vice versa). Decimal notation up to three decimal places is used, read and written.	• Measurements are converted independently between standard units of length, mass, volume and time (from a smaller unit to a larger unit and vice versa). Decimal notation to up to three decimal places is used, read and written.
			• Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation, including scaling.	• With the support of a teacher, measures of mass, volume and time are converted from a smaller unit of measure to a larger unit. These can also be read and written.	• Using all four operations, problems involving measure and using decimal notation are solved with prompts or reminders if needed.	• Using all four operations, problems involving measure, using decimal notation, are solved and problems involving converting units of time are solved independently.
			Solve problems involving the calculation and conversion of	• With support, problems involving the calculation and conversion	Generally, problems involving the calculation and conversion of units	Problems involving the calculation and conversion of units of

Wk	Objective	Strands	Milestone 3	Basic	Advance	Deep
			units of measure, using decimal notation up to three decimal places where appropriate.	of units of measure, using decimal notation up to three decimal places where appropriate, are solved.	of measure, using decimal notation up to three decimal places where appropriate, are solved.	measure, using decimal notation up to three decimal places where appropriate, are solved without support.
			Solve problems involving converting between units of time.	With the support of a teacher, practical apparatus and concrete objects, problems involving converting between units of time and involving measure are solved. • When reminders are provided and with pictorial representations if necessary, time durations over the hour can be calculated.	Generally, problems involving converting units of time are solved. • Time durations that are over the hour can be calculated and, with prompting, a timetable can be interpreted and used.	• Time durations that are over the hour can be calculated and a timetable can be interpreted and used.
30	To use statistics		• Solve comparison, sum and difference problems using information presented in a line graph.	With support, line graphs are used to solve comparison, sum and difference problems.	• Generally, line graphs are used to solve comparison, sum and difference problems.	• Line graphs are used to solve comparison, sum and difference problems.
			• Complete, read and interpret information in tables, including timetables.	With support, a range of tables can be used to record data. • With support, information in tables, including timetables is interpreted.	• Generally, a range of tables can be used to record data. Generally, information in tables can be read and interpreted.	When data is provided, and without support, two-way tables are completed. • Information from a range of tables is interpreted.
31			• Interpret and construct pie charts and line graphs and use these to solve problems.	With the support of a teacher, an appropriate scale is chosen and used when constructing graphs and charts. When prompts are given, simple pie charts can be constructed and interpreted. When prompts are given, the scale on bar graphs and line graphs can be interpreted.	Generally, appropriate scales are chosen for graphs. Frequency tables can be used to record discrete data independently. Pie charts are constructed and interpreted and the scale on bar graphs and line graphs can be interpreted. The information gathered from this interpretation can be used to solve problems. Generally, the difference between	Appropriate scales are chosen for graphs independently. Information in tables (including timetables) can be read, interpreted and completed. Pie charts can be interpreted and the scale on bar graphs and line graphs can be interpreted. The information gathered from this interpretation can be used to solve problems independently.

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				Generally, questions asked about a set of data are responded to.	discrete and continuous data is recognised. When prompts are given, the outcomes from data can be described and predicted, using the language of chance and likelihood.	Pie charts are interpreted and compared independently, where it is not necessary to measure angles. The difference between discrete and continuous data is recognised. Data presented in a misleading way is recognised. • The outcomes from data can be described and predicted independently, using the language of chance and likelihood.
			• Calculate and interpret the mean as an average.	With support, the mode and range is understood and used to describe a set of data and the mean can be calculated and interpreted as an average. • With support, two sets of results are described and compared using the range, mode, mean or median.	Generallly, the mode and range is understood and used to describe a set of data and the mean can be calculated and interpreted as an average. Generally, two sets of results are described and compared using the range, mode, mean or median.	Without support, the mode and range are understood and used to describe a set of data, and the mean can be calculated and interpreted as an average. The probability scale from 0 to 1 is used and understood, and methods based on equally likely outcomes to find and justify probabilities are used. Two sets of results are described and compared independently using the range, mode, mean or median.
32	To use algebra		• Use simple formulae.	There is an emerging understanding of how to solve balancing equations, such as: 20 + ____ = 40 – 10. • Simple formulae expressed in words are used.	• Simple formulae can be used, with reminders if necessary.	Formulae can be used when solving problems.
			• Generate and describe linear number sequences.	• With support, linear number sequences can be described and generated.	• With reminders, linear number sequences can be described and generated.	Complex linear number sequences can be described and generated.

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33			• Express missing number problems algebraically.	• With support, missing number problems can be expressed algebraically.	• Generally, missing number problems can be expressed algebraically.	Missing number problems are expressed algebraically.
			Find pairs of numbers that satisfy an equation with two unknowns.	With support, pairs of numbers that satisfy an equation, with two unknowns, can be found.	With prompts, pairs of numbers that satisfy an equation, with two unknowns, can be found.	Pairs of numbers that satisfy an equation with two or more unknowns can be found.
			• Enumerate possibilities of combinations of two variables.	• With support, possibilities of combinations of two variables can be enumerated.	• Generally, possibilities of combinations of two variables can be enumerated.	• Possibilities of combinations of two variables can be enumerated.