

MATHEMATICS	Core Curriculum Programme Year 9 - Sept 2026	National Qualifications Framework Level 1
<u>Expectations</u> In order to achieve Level 1 the learner is expected to demonstrate basic competency in applying mathematics in simple everyday situations. The student's competency is demonstrated by an ability to (a) carry out straightforward numerical calculations encountered in shopping, home, workshop or office environments (b) read basic measurement scales (c) extract and interpret straightforward information from tables and charts (d) solve problems that require a combination of basic mathematical knowledge and skills.		
<u>Assessment</u> A learner working at Level 1 will be required to demonstrate the ability to understand the nature of numbers and make use of them. Assessment tasks will therefore involve simple mathematical reasoning and straightforward calculations encountered in practical real-life situations presented in aural, oral and visual forms to reduce demands on reading and writing which may hinder the demonstration of these competencies. Pencil and paper jottings are accepted as a means of supporting the mental processes involved when solving simple mathematical problems or tasks.		
KNOWLEDGE (<i>theoretical and and or factual</i>) At Level 1: Basic General Knowledge.		
SKILLS (<i>cognitive-logical, intuitive and creative thinking, practical-manual dexterity, use of methods, materials, tools and instruments</i>) At Level 1: Basic skills required to carry out simple tasks.		
COMPETENCES (<i>responsibility and autonomy</i>) At Level 1: Work or study under direct supervision in a structured context.		

STRANDS		KNOWLEDGE	SKILLS	COMPETENCES	Learning Outcomes	
Number and Applications	Number	Knows how to count, read, write and order positive whole numbers.			i	Read and write numbers in figures and words up to 10 000.
					ii	Understand place value through partitioning of a four-digit number into thousands, hundreds, tens and ones.
					iii	Arrange a set of numbers in ascending and descending order.
					iv	Recognise and generate the next odd or even number less than 100.
	Number Operations	Understands the concepts associated with the four number operations (e.g. that multiplication is repeated addition).			i	Use mental addition and subtraction of numbers up to 100.
					ii	Use paper-and-pencil addition and subtraction of numbers up to three digits.
					iii	Learn multiplication facts up to 10×10 .
					iv	Multiply whole numbers by any one-digit number.
					v	Divide whole numbers by a one-digit number using repeated subtraction.
					vi	Multiply and divide whole numbers by 10, 100 and 1000.
	Fractions, Decimals and Percentages	Understands the language and notation of simple fractions, decimals and percentages as applied in real life situations.	Uses simple fractions to find parts of a quantity in real life contexts (e.g. $\frac{1}{2}$ cm, $\frac{1}{100}$ m, $\frac{1}{4}$ h, €1/10).		i	Reduce a fraction to its simplest form.
					ii	Add and subtract fractions that have a common denominator.
					iii	Find a fraction of a quantity.
					iv	Arrange a set of decimal numbers in ascending and descending order up to 2 d.p.
					v	Add and subtract decimal numbers up to 2 d.p.
					vi	Multiply decimal numbers by any one-digit number.
					vii	Find a percentage of a quantity (50%, 25%, 10%, 20%).

STRANDS		KNOWLEDGE	SKILLS	COMPETENCES	Learning Outcomes	
Number and Applications	Coordinates	Understands why coordinates are required to locate a point (in the first quadrant).	Describes the location of a point in the first quadrant using coordinates.		i	Read, write and plot coordinates using ordered pairs in the first quadrant.
	Time	Understands time on a 12 hour and 24 hour clock.	Calculates time intervals; Reads analogue and digital clocks.		i	Convert 12-hour to 24-hour clock and vice versa (on the hour and half hour).
					ii	Read, interpret and use a calendar and a timetable (on the hour and half hour).
					iii	Convert between different units of time, limited to one conversion.
	Rounding		Rounds a figure to the nearest unit, ten, hundred or thousand.		i	Estimate and round numbers to the nearest whole number.
					ii	Estimate and round numbers to the nearest ten and hundred.
	Calculator		Uses the calculator to work out calculations involving any of the four operations.		i	The use of the calculator is to be restricted to calculations involving the four rules. In order to use the calculator efficiently, students need to learn how to apply checks on the reasonableness of the answer through rough estimates.
	Problem Solving		Sorts out which operations can be used to work out simple problems situated in familiar everyday contexts (to include problems involving money, length, weight, temperature, etc.); Carries out calculations and solves simple problems involving the use of the four operations.	Displays confidence in using mathematics in simple everyday applications of the subject ; Attempts to understand a problem before trying to solve it ; Uses simple mathematical language to talk about the method and solution of a simple problem ; Checks the reasonableness of the solution in a supportive environment.	i	Apply the four rules in simple problems involving length, weight and capacity.
					ii	Convert euro to cents and vice versa.
					iii	Apply the four rules in simple problems involving money.
					iv	Emphasise the importance of carrying out rough estimates to check the accuracy of calculations especially when using a calculator.
	Directed Numbers	Recognises negative numbers occurring in real life situations.			i	Identify the larger and/or smaller between two numbers between -10 and 10 occurring in real-life situations such as lifts and thermometers.

STRANDS		KNOWLEDGE	SKILLS	COMPETENCES	Learning Outcomes	
Shape Space and Measurement	Shapes	Recognises simple solid and flat shapes.	Identifies, sorts and classifies solid and flat shapes.		i	Recognise special triangles: scalene, isosceles, equilateral and right-angled.
					ii	Recognise and know properties of the square and rectangle.
					iii	Draw squares, rectangles and triangles.
					iv	Identify the number of faces, edges and vertices of: cube, cuboid and cylinder.
					v	Identify the centre, circumference, radius and diameter of a circle.
					vi	Using compasses to draw circles and circle patterns given the radius.
					vii	Recognise and draw simple tessellations.
					viii	Identify and draw lines of symmetry.
	Measurement	Knows the units of measurement for length, area, weight and capacity.	Displays a feel for the units of measurement as applied in real life contexts ; Measures length, weight and capacity using appropriate metric units.		i	Use appropriate instruments to measure length and weight (mass).
					ii	Convert km to m; m to cm; cm to mm.
					iii	Convert kg to g.
					iv	Estimate and measure the perimeter of regular and irregular shapes and objects.
					v	Find the perimeter of squares and rectangles by counting unit lengths and by calculation (given the length and breadth).
					vi	Find the perimeter of compound shapes made up of squares and rectangles only.
					vii	Find the area of squares and rectangles by counting unit squares.
					viii	Find the area of compound shapes made up of squares and rectangles by counting unit squares.
					ix	Find the volume of cubes and cuboids by counting unit cubes.

Bearings	Understands the concept of compass directions.			i	Differentiate between and use the eight main compass directions.
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Algebra	Number machines and Sequences	Understands the purpose and meaning of a formula in words.	Uses a simple formula in words.		i	Describe verbally and construct a number machine involving one operation.
					ii	Work out the output of a number machine involving one operation.
					iii	Describe the rule for a given sequence involving one operation.
					iv	Extend simple pictorial patterns and number sequences.
					v	Generate a sequence from a rule given in words.
Data Handling	Data	Knows that data can be represented in pictorial forms by means of tables, diagrams and charts with simple scales.	Organises and presents data in simple tabular forms; Constructs, reads and interprets simple diagrams and charts (including timetables, bar charts and pictograms).		i	Collect data using surveys and experiments.
					ii	Compile and interpret frequency tables for discrete ungrouped data. (Include the use of tally marks)
					iii	Draw and interpret bar charts.
					iv	Interpret pictograms.
	Probability	Differentiates between the likelihood of different events			i	Describe the occurrence of an event as impossible, unlikely, even chance, likely and certain.
					ii	Find the probability by experiment.