

MARINA INTERNATIONAL SCHOOL

MATHEMATICS SCHEME OF WORK

FORM 2 - TERM 1

WEEK	TOPIC	TOPIC DETAILS
1.1	ALGEBRA (EXPRESSIONS AND EQUATIONS)	Knowing the different roles letters play in an equation, formulae and function (function machine with an output).
1.2	ALGEBRA (EXPRESSIONS AND EQUATIONS)	Knowing the algebraic operations, including brackets. Following the same order as arithmetic operations.
2.1	ALGEBRA (EXPRESSIONS AND EQUATIONS)	Use index notation for small positive integer powers.
2.2	ALGEBRA (EXPRESSIONS AND EQUATIONS)	Construct linear expressions.
3.1	LINEAR EXPRESSIONS	Simplify or transform linear expression with integer coefficients.
3.2	LINEAR EXPRESSIONS	Collection of like terms
3.3	LINEAR EXPRESSIONS	Multiplying a single term over a bracket.
4.1	SEQUENCE AND PATTERNS	Generate terms of a linear sequence using term-to-term and position-to-term rules of sequences, including spatial patterns
5.1	FRACTIONS	Express simple functions algebraically and represent them in mappings.
6.1	CONGRUENT SHAPES	Defined congruent shape.
6.2	CONGRUENT SHAPES	Knowing that, if 2D shapes are congruent, then the corresponding sides and angles are equal.

WEEK	TOPIC	TOPIC DETAILS
7.1	PROPERTIES OF QUADRILATERALS	Classify quadrilaterals according to their properties, including diagonal properties.
8.1	TRIANGLES	Knowing the hypotenuse in a right angled triangle.
8.2	PARALLEL LINES	Identify alternate angles and corresponding angles.
9.1	MIDPOINT OF A STRAIGHT LINE.	Finding the midpoint of a line segment AB, given the coordinates of points A and B
10.1	HANDLING DATA AND MEASURES	Interpret and make simple scale drawings
10.2	HANDLING DATA AND MEASURES	Choose suitable units of measurement to estimate, measure, calculate and solve problems in range o contexts, including units of mass, length, area, volume or capacity.
11.1	HANDLING DATA AND MEASURES	Identify and collect data to answer a question, select the method of collection, sample size and degree of accuracy needed for measurements.
12.1	HANDLING DATA AND MEASURES (STATISTICS)	Knowing the difference between discrete and continuous data.
12.2	HANDLING DATA AND MEASURES (STATISTICS)	Construct and use: <input type="checkbox"/> Frequency tables with given equal class intervals to gather continuous data. <input type="checkbox"/> Two – way tables to record discrete data
13.1	HANDLING DATA AND MEASURES (STATISTICS)	Calculate statistics for sets of discrete and continuous data, recognize when to use the range, mean, median and mode and, for grouped data, the modal class.
14.1	STATISTICS	Interpret tables, graphs and diagrams for discrete and continuous data draw conclusions, relating statistics and findings to the original question.
15.1	PROBABILITY	Know that if the probability of an event occurring is p, and then the probability of it not occurring is 1-p.
15.2	PROBABILITY	Find probabilities based on equally likely outcomes in practical contexts.

MATHEMATICS SCHEME OF WORK

FORM 2 - TERM 2

WEEK	TOPIC	TOPIC DETAILS
1.1	FACTORS AND MULTIPLES	Identify multiples, factors, common factor, highest common factors, lowest common multiples and primes, write a number in terms of prime factors.
1.2	FACTORS AND MULTIPLES	Add and subtract factors and mixed numbers
1.3	FACTORS AND MULTIPLES	Calculation of fractions of quantities
1.4	FACTORS AND MULTIPLES	Multiply and divide an integer by a fraction
2.1	PERCENTAGES	Calculate and solve problems involving percentage Of quantities.
2.2	PERCENTAGES	Percentage increase and decrease.
2.3	PERCENTAGES	Express one given number as a percentage or fraction of another. Use equivalent fractions decimals and percentages to compare different quantities.
2.4	SQUARES AND CUBES	Recall squares to 20×20 cubes $5 \times 5 \times 5$, and corresponding roots. Use known facts and place value to multiply and divide simple decimals.
3.1	SIMPLE PROPORTION	Use known facts and place value to calculate simple fractions and percentage of quantities.
3.2	SIMPLE PROPORTION	Solve simple word problems including direct proportion problems.
4.1	INTEGERS	Consolidate adding and subtracting integers and decimals including numbers with differing numbers of decimal places.

WEEK	TOPIC	TOPIC DETAILS
4.2	INTEGERS	Divide integers and decimals by a single-digit number, continuing the division to a specified number of decimal places.
5.1	REARRANGING FORMULAE	Derive and use simple formulae. E.g. convert degree to Fahrenheit.
5.2	REARRANGING FORMULAE	Substitute positive and negative integers into formulae.
5.3	REARRANGING FORMULAE	Linear expression and expressions involving small powers.
6.1	CONSTRUCTION AND GRAPH	Construct tables of values and use all four quadrants to plot the graphs of linear functions
6.2	CONSTRUCTION AND GRAPH	Recognize the equation of the form $y = mx + c$
7.1	COORDINATE GEOMETRY	Identify all the symmetries of 2D shapes.
7.2	COORDINATE GEOMETRY	Use straight edge and compasses to construct: <ul style="list-style-type: none"> <input type="checkbox"/> The midpoint and perpendicular bisector of a line segment. <input type="checkbox"/> The bisector of an angle.
8.1	COORDINATE GEOMETRY	Translate 2D shapes by translation, rotation, and reflection, and simple combinations of these transformations.
9.1	AREA OF SHAPES	Derive and use formulae for the area of a triangle, parallelogram and trapezium.
10.1	VOLUME OF SHAPES	Calculate the area of compound shapes, and length, surface area and volume of cuboids.
11.1	NETS	Surface areas of simple nets of solids.
12.1	DATA AND INTERPRETATION	Draw and interpret: <ul style="list-style-type: none"> <input type="checkbox"/> Frequency diagrams for discrete and continuous data <input type="checkbox"/> Pie charts <input type="checkbox"/> Simple line graphs for time series <input type="checkbox"/> Stem-and-leaf diagrams
13.1	STATISTICS	Comparing two distributions, using the range and one or more of the mode, median and mean.

MATHEMATICS SCHEME OF WORK

FORM 2 - TERM 3

WEEK	TOPIC	TOPIC DETAILS
1.1	SQUARES AND SQUARE ROOTS	Calculate squares and square roots
1.2	SQUARES AND SQUARE ROOTS	Cube and cube roots
1.3	SQUARES AND SQUARE ROOTS	Index notation for positive integer powers.
2.1	RATIOS AND PROPORTIONS	Simplify ratios, including different units.
2.2	RATIOS AND PROPORTIONS	Divide a quantity into more than two parts in a given ratio.
2.3	RATIOS AND PROPORTIONS	Use the unitary method to solve simple problems involving ratio and direct proportion
3.1	FRACTIONS	Use facts and place values to multiply and divide simple fractions.
3.2	FRACTIONS	Use the laws of arithmetic and inverse operations to simplify calculations with integers and fractions.
4.1	ORDERING	Use the order of operations, including brackets, with more complex calculations.
4.2	ORDERING	Multiply and divide integers and decimals by decimals.
4.3	LINEAR SEQUENCE	Construct and solve linear equations with integer coefficients.
4.4	LINEAR SEQUENCE	Use linear expression to describe the nth term of a simple arithmetic sequence, justifying its form by referring to the activity or practical context form which it was generated.

WEEK	TOPIC	TOPIC DETAILS
5.1	TRIANGLE AND QUADRILATERALS	Understand a proof that The angle sum of: <ul style="list-style-type: none"> • a triangle is 180 • a quadrilateral is 360.
5.2	TRIANGLE	The exterior angle of a triangle is equal to the sum of the two interior opposite angle.
6.1	TRIANGLE AND QUADRILATERALS	Solve geometrical problems using properties of angles, of parallel and intersecting lines, and of triangles and special quadrilaterals, with reasons and diagrams.
7.1	CONSTRUCTION	Use a ruler and compasses to construct: <ul style="list-style-type: none"> □ Circles and arcs □ A triangle given three sides □ A triangle given a right angle □ Hypotenuse and one side.
8.1	ENLARGEMENT	Understand and use the language and notation associate with enlargement, enlarge 2D shapes, given a center of enlargement and a positive integer scale factor
9.1	GRAPHS OF PRACTICAL SOLUTION	Draw and interpret graphs in real life contexts involving more than one component. E.g. travel graphs with more than one person.
10.1	CIRCLES	Know the definition of a circle and the names of its parts.
10.2	CIRCLES	Know the formulae for the circumference and area of a circle
11.1	PIE CHART	Compare proportions in two pie charts that represent different totals.
12.1	PROBABILITY	Compare estimated experimental probabilities with theoretical probabilities, recognize that: When experiments are repeated, different outcomes may result. Increasing the number of times on experiment is repeated generally leads to better estimates of probability.