St. Mary's

College FORM 1

Mathematics

Course Outline

2023-2024

TERM 1

Topic	Modules
Number operations and number theory	Historical development of the denary system Definition of the different number types and relation to each other Natural numbers, whole numbers, integers, rational, irrational numbers, real number. Identify the symbols used for each number set. Sequence number names and numerals Place value of each digit Rounding to the nearest 10,100, 1000 up to millions Rounding in context Estimating a given quantity of items Differentiate between or among (i) Rectangular, triangular and square numbers (ii) Factors and multiples of numbers (iii) Odd and even numbers

	(iv) Prime and composite numbers (v) Square numbers and their square roots

	Index notation Definition of prime factors. Simple test for divisibility Express a number as its product of prime factors Calculate the lowest common multiple (LCM) and Highest common factor (HCF) of a set of numbers. Number Patterns and sequence Pictorial logic sequence Generating sequence: special sequences eg Fibonacci, sequences with geometrical shapes Operations on whole numbers Addition, subtraction, multiplication, division Commutative, associative and distributive laws. Solve problems involving whole numbers Order of operation of numbers PEMDAS,BODMAS

Fractions	Defining fractions Comparing fractions Equivalent fractions Improper fractions Classifying fractions Word problems in fractions Perform the four operations on fractions
Decimals	Ordering decimals. Place value Rounding off to the prescribed decimal place up to 3 decimal places.

TERM 2

Topic	Module
Directed numbers	Concept of negative numbers Differentiate between, natural numbers, whole numbers and integers, real numbers. Order real numbers, use of number line for reference Perform the four operations on integers and real numbers. Recognize situation in everyday life where integers, real numbers are used

Introducing Algebra 1	Algebraic expression Vocabulary: variable , coefficient, constant, terms, expression, equation, substitution Representing worded expression as algebraic expression Evaluating algebraic expressions Simplifying algebraic expressions Expanding algebraic expressions
Units of measurement	Measure length, mass, using appropriate units Convert of measures from one unit to another dm, cm, m, km etc. mg, g, kg etc. Solve problems involving measurements
Perimeter and Area	Identify perimeter of plane and compound shapes Calculate perimeter of plane and compound shapes

	Solve problems involving perimeter

	Explain concept of area Identify units for area Identify surface area Calculate area of triangle, square, rectangle, circle ,compound shapes Solve problems involving areas

Term 3

Topic	Module
Statistics	Collect discrete data to address a problem Tally ungrouped discrete data in a frequency table Construct pictographs and block graph to represent data collected Interpret, draw conclusions from pictograph block graphs Find mode for data.
Algebra 2	Solving simple linear equation with one variable Solving worded problems involving algebraic equations

Geometry	Points, lines, line segment, rays, planes Angles: measure of turn Classifying angles Acute, obtuse, reflex, straight line, angle at a point supplementary, complementary, vertically opposite Measuring angles using a protractor Drawing angles using a ruler and protractor Identifying types of triangles Right-angle, scalene, equilateral, isosceles
Solid and plane shapes	Classify solids according to their properties Draw net of solids Create solid with their nets Classify polygons according to their properties Create patterns involving tessellations of plane shapes Solve problems involving solids and plane shapes