



Cardinal Hume Catholic School

Department of Mathematics



Year 7

Module 1

Number Theory

- Number types
- Place value
- Rounding
- Directed numbers
- Elementary properties
- Ordering (integers, negatives, decimals)

Basic Operations

- Efficient non-calculator methods
- Column methods (including with decimals)
- Calculations with negative numbers
- Order of operations

Angles

- Measure and draw angles
- Basic angle facts (point, straight line, right-angle sum rules, triangles, quadrilaterals, vertically opposite)
- Multi-step angle problems

Averages

- What are averages?
- Mode, Median and Mean
- Problem solving with averages
- Averages from frequency tables
- Range

Module 2

Fractions

- Fraction representations
- Equivalent fractions and mixed numbers
- Comparing and ordering fractions
- Fractions of...(integers and fractions)
- Multiplying and dividing fractions

Introducing Algebra

- Using symbols (letters)
- Notation

- Forming expressions
- Simplifying (+, -, x, ÷)
- Substitution into expressions and formulae

Area, Perimeter and Volume

- Units of measure
- Basic perimeter and area
- Triangles, Parallelograms, Trapezia
- Circles (circumference and area)
- Problem solving (including algebra)
- Volume of cubes/cuboids

Probability

- Probability scale and basic probability
- Probabilities sum to 1
- Expectation
- Sample spaces (2 events)

Module 3

Graphs

- Coordinates in all four quadrants
- Geometry with coordinates
- Plot horizontal and vertical lines
- Plot $x = y$, $y = -x$
- Midpoints of line segments

Fractions, Decimals, Percentages

- Define percentages
- Convert FDP both ways
- Compare and order mixed lists
- Express a number as a fraction/percentage of another
- Percentage of a number using multipliers

Equations

- Form equations to solve through function machines
- Solve 1 step equations
- Solve 2 step equations
- Solve equations with unknowns on both sides
- Form and solve equations based on perimeter/area and angles

Symmetry

- Rotation and Reflection properties
- Perform and describe reflections and rotations
- Define parallel and perpendicular lines
- Properties of 2D shapes (symmetry and angle properties)