

Mathematics KS3: Year 8



Formula and Inequalities

- Substitution
- Solve inequalities
- Represent inequalities
- Rearrange formula
- **Rearrange formula requiring factorisation**

Constructions

- Accurate line segments and angles
- Bisection
- Loci and scale diagrams

Compound Measures

- Metric and Imperial
- Distance Time Graphs
- Speed
- **Density**

SUMMER
3:1

Charts and Diagrams

- Frequency diagrams
- Bar charts
- Pie charts

Averages

- Mode, median, range and mean from a list or table
- **Grouped Frequency**
- Types of data and sampling

SUMMER
3:2



Angles

- Angle rules
- Interior and Exterior angles
- Parallel Lines

Standard Form

- Types of number including powers
- Operations with decimals
- Writing numbers in standard form

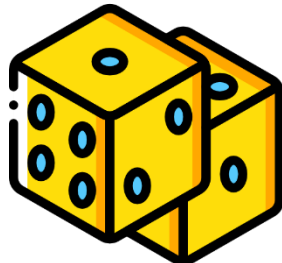
Probability

- List outcomes
- Theoretical probability
- Relative frequency
- 2 way tables

Percentages

- Percentage of an amount
- Increase by a percentage
- Amounts as a percentage

SPRING
2:2



Pythagoras Theorem

- Pythagorean triples
- **Applying Pythagoras in real life**
- Types of triangle

Graphs

- Coordinates in 4 quadrants
- Linear graphs
- $Y=mx+c$
- **Quadratic Graphs**

Transformations

- Reflection and Rotation on coordinate grids
- **Enlargement from a centre**
- Translation and vector notation



Area, Perimeter and Volume

- Area and perimeter of triangles, quadrilaterals and trapezia
- Area and Circumference
- Volume of prisms

SPRING
2:1

Equations

- Solve 2 step equations
- **Unknowns on both sides**
- Form equations

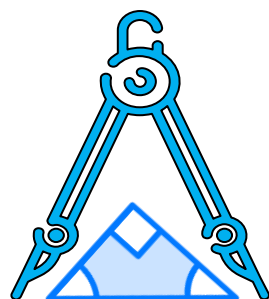
Sequences

- Continuing and generating arithmetic sequences
- Find the nth term
- **Fibonacci sequences**

Powers and Roots

- Know Squares, Cubes, and Roots
- Index Notation
- Use of Index Laws

AUTUMN
1:2



Rounding and Estimation

- Decimal Places
- **Significant figures**
- Estimation by rounding

Fractions & decimals

- Four operations
- Mixed numbers and Improper Fractions
- Fraction of an amount

Ratio

- Use ratio notation
- Simplify ratios
- Ratios as fractions
- Divide in a given ratio
- Ratios of the form 1:n

Algebraic Manipulation

- Expand and simplify single brackets
- **Expand double brackets**
- Factorise expressions
- Substitution and Formula

Factors Multiples and Primes

- HCF, LCM
- Prime Factor decomposition
- Venn diagram Notation

Numeracy

- Four Operations
- Money problems
- Negative numbers

AUTUMN
1:1

OUR LEARNING JOURNEY

Key
Topics in green are for Set 1/2 only

