# **Mathematics KS3: Year 8**

### Formula and Inequalities

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

### Constructions

 Accurate line segments and angles

 Averages
 Mode, median, range and mean from a list or

**Grouped Frequency** 

Types of data and

- Bisection
- Loci and scale diagrams

table

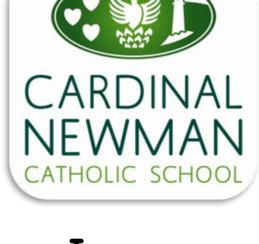
## **Compound Measures**

- Metric and Imperial
- Distance Time Graphs

**SUMMER** 

3:2

- Speed
- Density



## **Charts and Diagrams**

Frequency diagrams

**Angles** 

Angle rules

Interior and

**Exterior angles** 

**Parallel Lines** 

- Bar charts
- Pie charts

# sampling

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

**SPRING** 

2:2

# •

**Graphs** 

Coordinates in 4

quadrants

Y=mx+c

Linear graphs

**Quadratic Graphs** 

SUMMER 3:1

# Probability

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

### Percentages

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

# Transformations

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

# x=?

# **Pythagoras Theorem**

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

# 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

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

# Sequences

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

# AUTUMN 1:2

# \*+-



# Fractions & decimals

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

### **Rounding and Estimation**

- Decimal Places
  - Significant figures
- Estimation by rounding

# Ratio

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

# AUTUMN 1:1

# 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

# OUR LEARNING JOURNEY

# **Key**

Topics in green are for Set 1/2 only

