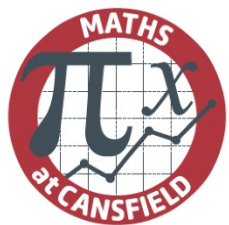


KS4 Foundation Roadmap



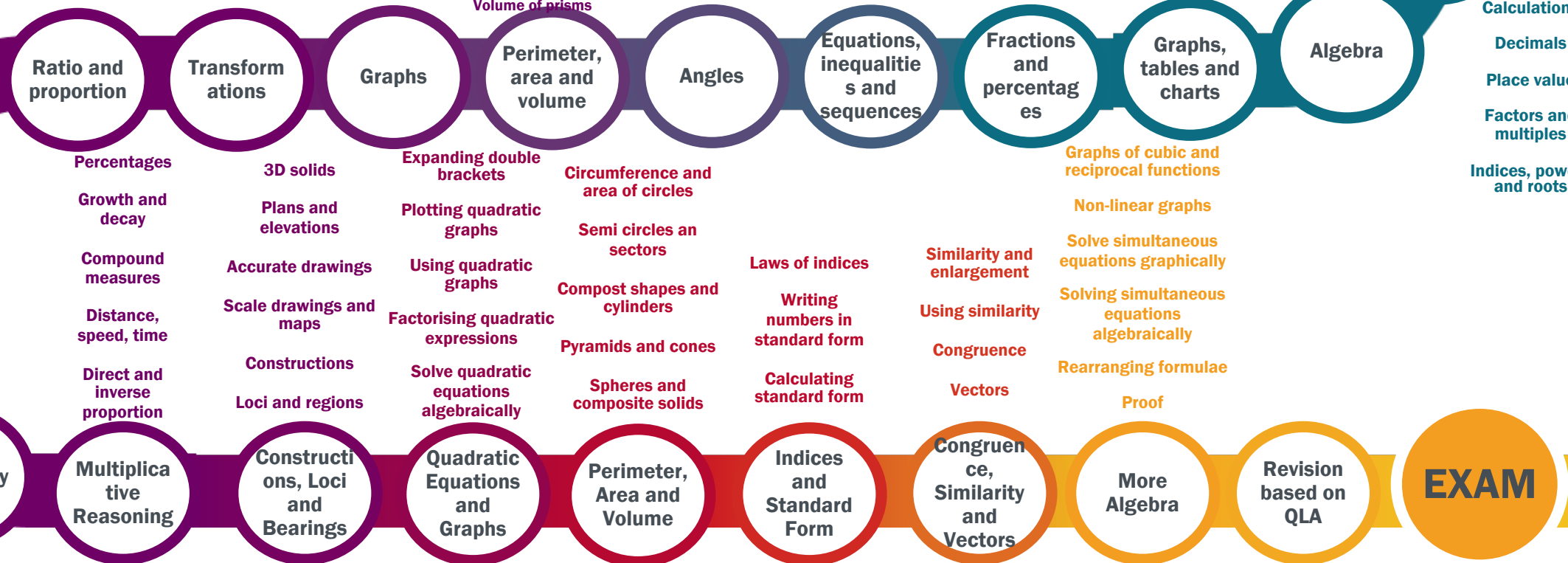
YEAR 10

Number

- Calculations
- Decimals
- Place value
- Factors and multiples
- Indices, powers and roots

EXAM

- Pythagoras' theorem
- Using the sine, cosine and tangent ratios
- Finding missing sides and angles
- Right-angles triangles
- Calculating probability
- Two events
- Experimental probability
- Venn diagrams
- Tree diagrams



- Working with expressions
- Formulae
- Expanding and factorizing
- Substitution
- Rearranging formulae

- Frequency tables
- Two-way tables
- Stem and leaf diagrams
- Pie charts
- Scatter graphs

- Calculating with fractions
- Mixed numbers
- Fractions/Decimals/percentages
- Working with percentages

- Solving equations
- Writing inequalities
- Solving inequalities
- Using formulae
- Generating sequences
- Finding the nth term

- Properties of shapes
- Angles in parallel lines
- Angles in triangles
- Angles in polygons

- Rectangles, triangles and parallelograms
- Trapezia
- Converting units of area and volume
- Compound shapes
- Surface area
- Volume of prisms

- Coordinates
- Linear graphs
- $y = mx + c$
- Distance-time graphs
- Real-life graphs

- Translation
- Reflection
- Rotation
- Enlargement

- Writing and using ratios
- Comparing using ratios
- Proportion

- Similarity and enlargement
- Using similarity
- Congruence
- Vectors
- Proof

- Laws of indices
- Writing numbers in standard form
- Calculating standard form

- Circumference and area of circles
- Semi circles and sectors
- Composite shapes and cylinders
- Pyramids and cones
- Spheres and composite solids

- Expanding double brackets
- Plotting quadratic graphs
- Using quadratic graphs
- Factorising quadratic expressions
- Solve quadratic equations algebraically

- 3D solids
- Plans and elevations
- Accurate drawings
- Scale drawings and maps
- Constructions
- Loci and regions

- Percentages
- Growth and decay
- Compound measures
- Distance, speed, time
- Direct and inverse proportion

KS4 Higher Roadmap

YEAR 10

Number

Algebra

Interpreting and Representing Data

Fractions, Ratio and Proportion

Trigonometry

Graphs

Area and volume

Transformations

Equations and inequalities

Probability

Further Statistics

YEAR 11

EXAM

Revision based on QLA

Circle Theorems

Proportion and graphs

Vectors and Geometric proof

More Algebra

Equations and Graphs

More trigonometry

Similarity and Congruence

Multiplicative reasoning

Algebraic indices
More expanding and factorizing
Equations
Formulae
Linear Sequences
Non-linear sequences

Statistical diagrams
Time series
Averages and range
Statistical diagrams

Fractions
Ratios
Percentages

Right angled trigonometry (SOHCAHTOA)
Bounds with trigonometry
Solving problems in 3D

Line segments
Cubic and reciprocal graphs
More graphs

Units of accuracy
Accuracy
Sectors of circles
Spheres and cones

Plans and elevations
Enlargement
Combinations of transformations
Bearings
Scale drawings

Solving quadratic equations
Complete the square
Solving linear and quadratic simultaneous equations
Solving inequalities

Experimental probability
Independent events and tree diagrams
Conditional probability

Sampling
Cumulative frequency and box plots
Drawing and interpreting histograms
Comparing and describing populations

Number problems and reasoning
Negative and Fractional Indices
Surds

Radii and chords
Tangents
Angles in circles
Applying circle theorems

Graphs of exponential functions
Rate of change graphs
Interpreting velocity time graphs

Vectors and vector notation
Vector arithmetic
More vector arithmetic
Parallel vectors and collinear points
Solving geometric problems

Rearranging formulae
Algebraic formulae
Simplifying algebraic fractions
Solving algebraic fraction equations
Functions
Proof

Solving simultaneous equations graphically
Representing inequalities graphically
Graphs of quadratic functions
Solving quadratic functions
Solving equations graphically
Graphs of cubic functions

Trigonometric graphs
Sine rule
Cosine Rule
Area of a triangle
Transformations of graphs

Similarity
Area and volume similarity

Growth and decay
Compound measure

