START YEAR 7

Visual & numerical Sequences, function machines

Equality, solving 1-step equations using the inverse, collecting like terms

Autumn 1

Algebraic notation, substitution, generating sequences using the nth term

Equivalent Fractions & simplifying fractions

Numbers: Equivalence, Place Value, rounding, ordering & comparing numbers & decimals

Autumn 2

Use & Interpret pie charts

Averages: Finding the Range & Median

Perimeter of shapes

Factors, multiples & order of operations

Area of rectangles, triangles & parallelograms

Fraction & Percentage of Amounts

Spring 1

Mental & Written Arithmetic, Financial Maths, frequency trees

Bar charts / line charts

Converting metric units

Averages: Finding the Mean

Representing fractions, improper & mixed fractions, adding/subtracting fractions

Calculations with Directed Numbers

Spring 2

Solving 2-Step Equations

Geometric Notation & types of angles

Constructing triangles & polygons accurately

Angle Facts & Reasoning

Summer 1

Measuring & drawing angles, parallel & perpendicular lines

Draw pie charts

Mental, Written & Calculator Strategies, Estimation

HCF, LCM, Prime Numbers, Conjectures & Proof

END OF YEAR 7

Summer 2

Sets & Venn Diagrams, Probability & Sample Space

Laws of Indices
Recognise first 10 square & cube numbers

Prime factor decomposition, finding HCF & LCM through listing

Autumn 1

Rounding & estimation

Calculations with percentages & fractions

Ratio-Simplifying, expressing quantities in ratio, fractions & percentages

Exchange rates, best buys, Reading currencies from conversion graphs

Autumn 2

Solving equations (inc unknown both sides)
Expanding & factorising brackets

Convert units of measure (imperial & metric), Mass & Capacity

Spring 1

Reflection, Rotational symmetry, Enlargement & mixed transformations

Straight line graphs & equations - Introduce y=mx+c find gradients

Circle area & circumference. Volume of cylinders

Spring 2

Representing data in bar charts, pie charts & venn diagrams (Drawing, Interpreting & comparing)

Area of compound shapes, surface area & volume of cuboids

Probability experimental & relative frequency. Completing venn diagrams

Summer 1

Averages, quartiles, frequency tables, Stem & leaf, scatter graphs

Sequences & patterns:
Finding the next term, term to term rule & nth term

END OF YEAR 8

Summer 2

Parallel lines , Bearings & construction

Simplifying expressions, Expanding single/double brackets, factorisation

Angles in Parallel lines, Interior & Exterior Angles in Regular & Irregular Polygons

Autumn 1

Prime factors, HCF, LCM, Laws of Indices & Standard Form

Constructions & Loci

Surds: simplifying & calculating +-x/

Averages from Frequency tables (inc cumulative frequency & fx), Estimated averages from grouped frequency tables

Autumn 2

Rounding to significant figures & estimation

Representing Charts & graphs: Pie, Line, time series, scatter, stem & leaf, 2-way tables

Pythagoras' Theorem   **Trigonometry**

Linear graphs, gradients, intercepts & parallel lines

Spring 1

Forming & Solving Equations, rearranging formulae

Scale factors & similar triangles

Sequences: Linear & non-linear

Non-linear graphs (quadratic, exponential, reciprocal), inc estimating solutions from graphs

Spring 2

Multipliers, Percentage Increase/Decrease, Repeated Percentage Change

Factorising & solving quadratics

Sharing in Ratio, Direct/Indirect proportion, Recipes, Best Buys

Direct/Inverse proportion (algebraic)

Summer 1

Conversions & Conversion graphs

Area, surface area & volume of prism

Compound Measures (Speed, Density & Pressure), Distance/Velocity Time graphs

Summer 2

Congruency & Transformations

Circles & sectors: Pi, circumference, area & perimeter

Similarity & congruency

Pythagoras' Theorem & Trigonometry

Autumn 1

Enlargement using scale factors

Inequalities on numbers lines, Solving inequalities

Straight line graphs y=mx+c, gradients & intercepts

Bearings

Autumn 2

Plotting quadratic graphs

Solving Simultaneous Equations graphically, via substitution & elimination

Circle: circumference, area, radius/diameter, arcs & sectors

Spring 1

Loci & Constructions: bisectors, congruent triangles

Volume & density

Growth & Decay: Repeated % increase/decrease, compound interest

Direction vectors, scalars, adding/subtracting

Spring 2

Ratios & Fractions: direct & inverse proportion, currency conversion, best buys, 1:n, combining ratios

Speed, distance, time

Rates of Change

Summer 1

Probability, venn diagrams & tree diagrams

Density. mass, volume

Population & samples, line & pie charts, averages, stem & leaf, extrapolation

Summer 2

Arithmetic, estimation & rounding, financial maths

START YEAR 10 higher

Enlargement & transformations

Trigonometry, 3D trig, sine & cosine rule, area of triangles using 1/2absinC

Autumn 1

Similar shapes, area & volume, congruency proof

Representing Inequalities, Solving linear & quadratic inequalities via graphs

Bearings (inc with trigonometry & pythagoras)

Straight line graphs y=mx+c, perpendicular lines

Autumn 2

Plotting quadratic & other non-linear graphs

Solving linear & non-linear simultaneous equations (graphical, substitution, elimination)

Circle: circumference, area, radius/diameter, arcs & sectors

Volume & surface area of cylinders, cones & spheres, Density

Spring 1

Loci & Constructions: bisectors, congruent triangles

Circle Theorems

Growth & Decay: Repeated % increase/decrease, compound interest

Vectors: represent, notation, parallel, geometric arguments & vector proof

Spring 2

Ratios & algebra: direct & inverse proportion, currency conversion, best buys, 1:n, combining ratios

Compound Measures & Rates of Change: Speed, Density, Pressure, distance/time graphs

Surds, Accuracy &, Upper/Lower Bounds

Summer 1

Probability, venn diagrams, tree diagrams, conditional probability

Histograms, Cumulative Freq, Graph types

Calculations with Algebraic Fractions

Geometric & Quadratic Sequences

END OF YEAR 10 higher

Summer 2

Algebraic Proof

Laws of Indices, Standard Form

START YEAR 11 foundation

Expanding & factorising with quadratics, representing & solving inequalities

Enlargement, similarity & congruence

Solving Simultaneous Equations

Autumn 1

Laws of Indices & standard form

Pythagoras & Trigonometry

Volume of pyramids, cones & spheres

Linear Graphs y=mx+c & plotting non-linear graphs

Systematic Listing

Autumn 2

Using graphs: distance time / speed time

Probability, Venn diagrams & tree diagrams

Rearranging formulae & using function machines

Vectors, Scale Diagrams, Angles & Bearings. Transformations & Loci

Representing Data & extrapolation

Spring 1

Proportion: Direct/Indirect, Recipes, Best Buys etc

Estimation, Limits of Accuracy & Financial Maths

Percentages, Compound Measures

Sharing & Combining Ratios

EXAM ANALYSIS-BASED REVISION

Spring 2

EXAM ANALYSIS-BASED REVISION

Summer 1

GCSE TIME!!!

START YEAR 11 higher

Manipulating quadratics

Iteration

Trigonometric graphs

Exact trig values

Autumn 1

Algebraic proof

Solving & sketching quadratics: factorising, quadratic formula. completing the square

Algebraic functions: composite and inverse

Graph transformations

Advanced ratios (inc with algebra)

Gradients, intercepts & equations

Algebraic Proportion: direct & inverse

Equations of circles & tangents

Inequalities

Autumn 2

Parallel & perpendicular lines

Y=mx + c

Vectors: Properties, ratios & proof

Graphs: quadratics, cubic, exponential, reciprocals etc

Real life graphs: conversion, distance, histogram

Constructions & Loci

Congruence

advanced Trig: Sine & Cosine

Area & Volume

Spring 1

Probability: tree diagrams & venn

Circle theorems

Lengths, areas & vol of similar shapes
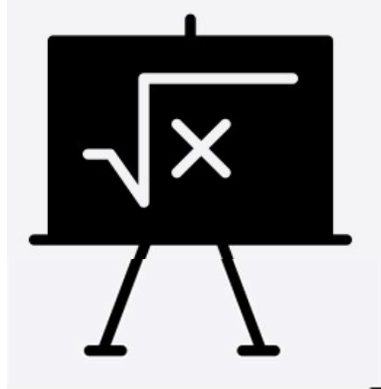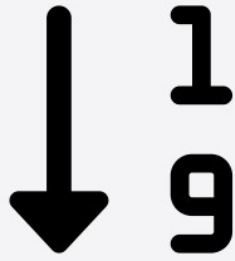
Trigonometry

Density

EXAM ANALYSIS-BASED REVISION

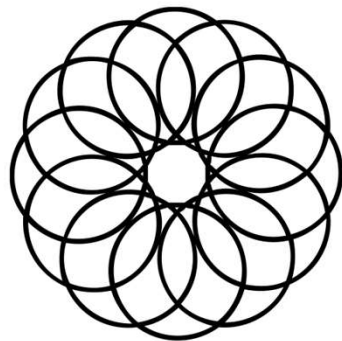## Spring 2
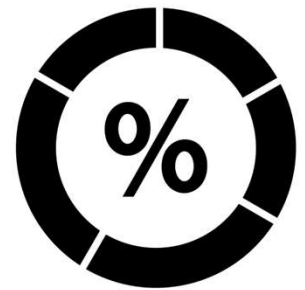
EXAM ANALYSIS-BASED REVISION

Summer 1

GCSE TIME!!!

COLOUR-CODE KEY

Number

Algebra

Ratio, Proportion & Rates of Change

Geometry

Probability

Statistics