



Post 16

Binomial distribution, conditional probability, hypothesis testing  
 Correlation and regression, variance and standard deviation. Normal distribution  
 Equation of a circle, radians, arc length and sectors, combinations of transformations  
 Create equations between proportional variables  
 Differentiation, integrations, graph-drawing, polynomials, parametric equations  
 Binomial expansions to approximate values, sums of series, Newton-Raphson, laws of logs

Probability  
 Statistics  
 Geometry  
 Ratio  
 Algebra  
 Number

$$x^3 - 2x + 3 = 0$$

$$x^3 = 2x - 3$$

$$x = \sqrt[3]{2x - 3}$$

$$x = (2x - 3)^{\frac{1}{3}}$$

$$\Rightarrow x_{n+1} = (2x_n - 3)^{\frac{1}{3}}$$

Composite and inverse functions, revision of all number work, links to other topics, numerical fluency  
 Algebraic Proof, exponential graphs, tangents, normals, review of all algebra  
 Area under a graph, compound measures including changing units  
 Congruence proof, similar triangles, trigonometry review, review of circle theorems  
 Quartiles, review of Year 9 and 10 statistics  
 Exam style Two-way tables and Venn from words

Set theory and notation, algebraic tree diagrams, systematic counting strategies  
 Reading and interpreting Histograms, review of Year 9 statistics, reverse mean  
 Length, area & volume scale factors, vectors, loci problems, volume of cones etc, transformations  
 Compound measures, journey and time problems  
 Regions of inequalities, quadratic simultaneous equations, functions, graph transformations  
 Upper and lower bounds calculations, simplifying surds, problem solving with surds, iteration

Year 10

# KHS MATHS - Curriculum Map

Negative and fractional Indices, worded SF calculations, recurring decimals to fractions, rationalising surds  
 Simultaneous Equations, solving quadratics, algebraic fractions, equation of a straight-line  
 Reverse Percentage changes, proportionality involving squares and roots  
 3D Trigonometry and Pythagoras, circle theorems, sine and cosine rules, use  $\frac{1}{2}ab\sin C$  for area of a triangle  
 Pie-charts, scatter diagrams, cumulative frequency, stem-and-leaf diagrams  
 Capture/ recapture, using Venn diagrams for HCF and LCM

Year 8

Sample space diagrams, 2-way tables, relative frequency, AND/OR rules, dependent events on tree diagrams  
 Averages from frequency tables including grouped data  
 Trigonometry, similar shapes, constructions, bearings, angles in parallel lines  
 Use of multipliers, Compound interest, direct and inverse proportionality  
 Solve linear equations and inequalities, simplifying double brackets, quadratic sequences and graphs  
 Calculating in Standard Form, all fraction calculations, simplifying surds

Decimals, standard form, fractions, rounding to n decimal places and significant figures  
 Indices, Simplifying expressions, solving equations, drawing graphs of equations  
 Percentage calculations, interest rates, proportional changes  
 Angles in polygons, Pythagoras, basic trigonometry, volume and surface areas, enlargement  
 Averages including from averages from tables  
 Fundamental Theorem of Probability, Sets and Venn diagrams, independent events on Tree Diagrams

Number  
 Algebra  
 Ratio  
 Geometry  
 Statistics  
 Probability

$$80\% = \frac{80}{100}$$

SAMPLE SPACE FOR A PAIR OF DICE

	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

