

Year 10

Autumn 1	Autumn 2
Number	Geometry

Spring 1	Spring 2	Summer 1	Summer 2
Reasoning	Geometry & number	Sampling & probability	Applications of algebra

All should be confident and competent in Key Stage 3 material. Review of these prerequisites may be useful for each unit:

Calculate with fractions Convert and solve problems with fractions and percentages Review indices	Ratio notation, links to vulgar fractions, decimals and percentages Reflection, rotation and translation Pythagoras' theorem
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Algebraic notation and substitution, including kinematics formulae Congruence Straight-line graphs Equations and inequalities Rearranging formulae	Decimal calculations and rounding Units Area and perimeter of plane shapes, including composite shapes Angle rules	Sample spaces The probability scale Vulgar fractions, decimals and percentages	Real-life graphs Deriving and using expressions, formulae and equations
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All will be assessed on this specific Key Stage 4 content

Calculations with and rules of indices Calculations with standard form Compound interest Growth and decay Standard non-linear sequences	Enlargement Similar shapes Bearings Trigonometry in right angled triangles
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Algebraic arguments Loci Key angle and shape facts Coordinates (including midpoints, problems) Equations of parallel & perpendicular lines Vectors	Properties of 3-D shapes; their plans and elevations Estimation Surface area and volume of pyramids, cones and spheres (including exact answers) Angle proofs Limits of accuracy	Populations and samples Theoretical and experimental probability Listing Set notation Venn diagrams Combined events, including tree diagrams	Expand and factorise binomials Quadratic equations Cubic and reciprocal graphs Simultaneous equations Graphical solutions of equations
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Highest attaining students will also be assessed on the following material, which provides good preparation for Key Stage 5

Recurrence relations Surds Recurring decimals Fractional indices Quadratic sequences	Negative scale factors of enlargement 3-D trigonometry and Pythagoras' theorem Combine transformations
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Vector proofs Trigonometry graphs Equations of perpendicular lines Further inequalities	Similar areas and volumes Upper and lower bounds Trigonometry in all triangles	Conditional probability	Exponential graphs Complete the square; quadratic formula Quadratic inequalities Algebraic fractions
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Throughout KS4: Students will need to keep working on key skills as they occur within other topics, as well as when the skills are being explicitly addressed. These include: Addition, subtraction, multiplication and division; order of operations; fractions, decimals and percentages; rounding and estimation; and algebraic notation.