Holme Court School Cambridge

Welcome to KS4 Mathematics

	Year 10	**Year 11**
Autumn 1	Number • Place value • Operations • Decimals • Inverse relationships • Squares and square roots • Order of operations Integer / Equality / Positive / Negative / Inverse / Square Number / Square Root / Index / Power / Order of Operations / Reciprocal	Number • Rounding • Estimation • Standard form Rounding / Estimate / Check / Significant Figure / Standard Form
Autumn 2	Geometry (2D) • Polygon naming and sorting • Properties of polygons • Angle relationships • Similar and congruent shapes • Transformations	Geometry (3D) • Naming and visualising • Identifying properties of faces • Calculating volume and surface area • Drawing plans • Use of ratios to scale shapes up and down

	Parallel / Perpendicular / Right Angle / Polygon / Regular Polygon / Symmetry / Reflection / Rotational Symmetry / Quadrilateral / Square / Rectangle / Parallelogram / Trapezium / Kite / Rhombus / Triangle / Internal Angle / External Angle / Acute / Right Angle / Obtuse / Reflex / Similar Shapes / Congruent Shapes / Transformation / Scaling Factor / Translation / Rotation / Enlarge / Vector	Point / Line / Vertex / Edge / Plane / Cube / Cuboid / Prism / Cylinder / Pyramid / Cone / Sphere / Volume / Surface Area / Plans /
Spring 1	Fractions • Computing with fractions • Converting between fractions, decimals, and percentages • Problems in context • Ratios Fraction / Numerator / Denominator / Mixed Number / Improper Fraction / Percent / Ratio	Linear Algebra • Sketch graphs in y=mx+c format • Determine equation of given linear graph • Use linear graphs to solve real world problems • Interpret gradients of graphs • Graphically solve simultaneous equations Linear / Constant / Gradient / Rate of Change / Quadrant / Simultaneous Equations / Continuous / Intercept
Spring 2	Probability • Describe frequency and outcomes of situations in terms of probability • Use tree diagrams to determine lists of possible outcomes	Quadratic Algebra • Sketch curves of quadratics, cubic, and reciprocal functions • Identify and interpret roots, intercepts and turning points graphically and algebraically

	Probability / Frequency / Outcome / Experiment / Table / Certain / Likely / Even Chance / Unlikely / Impossible / Tree Diagram / Fair / Biased	Quadratic / Cubic / Reciprocal / Curve / Quadrant / Root / Intercept / Turning Point
Summer 1	Algebra • Notation • Simplifying and manipulating expressions and equations • Expanding brackets • Collecting like terms Expression / Equation / Formula / Inequality / Term /Factor / Identity / Coefficient / Constant / Variable / Substitute / Simplify / Factor	Statistics • Infer properties of populations or distributions from a sample while knowing the limitations of sampling • Interpret and construct tables, charts, diagrams, and graphs • Draw lines of best fit Population / Distribution / Sample / Frequency / Mean / Median / Mode / Modal Class / Spread / Range / Outlier / Correlation / Causation / Scatter Graph
Summer 2	Algebra • Law of indices • Application of standard formulae • Rearranging equations • Sequences Expression / Equation / Formula / Inequality / Term /Factor / Identity / Coefficient / Constant / Variable / Substitute / Simplify / Factor / Sequence / n^{th} Term	Triangles • Sorting and classifying triangles • Pythagoras' Theorem • Trigonometry (sin, cos, tan) Right Triangle / Isosceles / Scalene / Equilateral / Similarity / Congruence / Trigonometry / Sin / Cos / Tan Review