Lesson Sequencing	The High 5 Lesson : to be used throughout year	Further Challenge Opportunities
Unit 1: Algebra and functions • 1a. Algebraic expressions – basic algebraic manipulation, indices and surds • 1b. Quadratic functions – factorising, solving, graphs and the discriminants • 1c. Equations - quadratic/linear simultaneous • 1d. Inequalities – linear and quadratic (including graphical solutions) • 1e. Graphs – cubic, quartic and reciprocal • 1f. Transformations – transforming graphs – f(x) notation **Unit 2: Coordinate geometry in the (x, y) plane** • 2a. Straight-line graphs, parallel/perpendicular, length and area problems • 2b. Circles – equation of a circle, geometric problems on a grid **Unit 3: Further algebra** • 3a. Algebraic division, factor theorem and proof	**Consolidation**: Tasks to support prior learning including past exam questions. **Modelling**: Model examples for each topic when taught. Also exam questions to recap. **Response and Feedback**: Q & A, oral feedback to whole class and individuals, improvement tasks, extension tasks, peer assessment tasks, marking of homework and assessments in depth. **Challenge**: use of exam questions and problem solving questions from text book. Mixed exercises also provide challenge questions. **Independence**: Pupils to work through mixed exercises and review exercises in text book.	**Extension** Exam and problem solving questions provided. Mixed exercises and review exercises provided to challenge HAP. Use of Advanced Maths Support Programme for problem solving days, STEP and AEA test preparation days.

Unit 4: Trigonometry
- 4a. Trigonometric ratios and graphs
- 4b. Trigonometric identities and equations

Unit 5: Vectors (2D)
- 5a. Definitions, magnitude/direction, addition and scalar multiplication
- 5b. Position vectors, distance between two points, geometric problems

Unit 6: Differentiation
- 6a. Definition, differentiating polynomials, second derivatives
- 6b. Gradients, tangents, normals, maxima and minima

Unit 7: Integration
- 7a. Definite integrals and area under curves
- 7b. Definite integrals and areas under curves

Unit 8: Exponentials and logarithms
- 8a. Exponential functions and natural logarithms

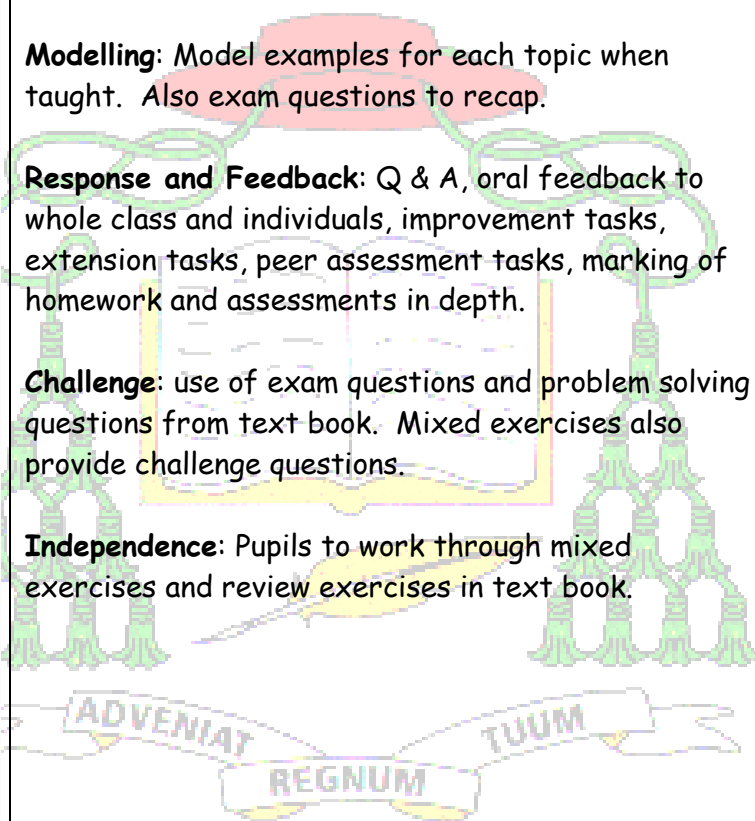**Consolidation**: Tasks to support prior learning including past exam questions.

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Unit 1: Proof

- 1a. Proof – Examples including proof by deduction, proof by exhaustion and disproof by counter example

Unit 2: Algebraic and partial fractions

- 2a. Simplifying algebraic fractions
- 2b. Partial fractions

Unit 3: Functions and modelling

- 3a. Modulus function

Consolidation: Tasks to support prior learning including past exam questions.

Modelling: Model examples for each topic when taught. Also exam questions to recap.

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