Advanced Mathematics Support Programme®

Core Maths Comparison/Summary of Syllabi

Awarding Body	Content	Examination / Assessment
AQA (Mathematical Studies)	**Compulsory Content:** Data analysis, (Fermi) estimation, personal finance and critical analysis. **Optional Content:** **Option 1:** Statistics (Normal distribution, correlation (PMCC only) and regression, probability and estimation) **Option 2:** Critical path and risk analysis (Expectation and Venn diagrams, CPA, using probability) **Option 3:** Graphical techniques (graphs of functions, intersection points, rates of change, exponential functions)	**Paper 1 (compulsory content):** 1.5 hours – Compulsory content assessed. **Paper 2 (mainly optional content):** 1.5 hours – Critical analysis and optional content (1 of 3 options). Calculator allowed. Preliminary material used in both examinations (available from March 1)
Edexcel (Mathematics in Context)	**All content compulsory – no optional content.** ■ Applications of Statistics – content includes: Spearman's Rank Linear Regression Product Moment Correlation Variance and Standard Deviation ■ Probability – content includes: Using Venn diagrams and set notation Conditional probability, risk ■ Linear Programming – content includes: Graphical solutions ■ Sequences and Growth – content includes: Graphing exponential and reciprocal functions Gradients of curves (not differentiation) Quadratic and Fibonacci sequences APs and GPs (terms and sums)	**Paper 1: Comprehension** 1 hour 40mins (40% of total) Source booklet used for all questions. **Paper 2: Applications** 1hour 40mins (60% of total) Second source booklet (not pre-release) used for first section. Calculator allowed for both papers. One common theme/context tested in both papers (within section A of paper 2).

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OCR (Quantitative Problem Solving)	Uses the modelling, statistical problem solving and financial problem solving cycles. **Noteworthy Content (Introduction to Quantitative Reasoning):** Use of upper and lower bounds when estimating Use of compound measures and dimensional analysis Use of the Normal distribution Use of spreadsheets when solving financial problems Logarithmic scales and the exponential function Estimating the gradient of curves Use of probability when assessing risk **Noteworthy Statistical Problem Solving Content:** Hypothesis testing Detailed sampling techniques Sources of information Standard deviation (including effect of linear transformations) Normal distribution Chi Squared test Bivariate data (not regression)	**Paper 1 – Introduction to Quantitative Reasoning (2 hours)** Source material used and available from mid-March. **Paper 2 – Statistical Problem Solving (2 hours)** Source material used and available for use throughout the year. Calculator allowed for both papers.
OCR (Quantitative Reasoning)	**Noteworthy Content (Introduction to Quantitative Reasoning)** – i.e. identical to the Quantitative Problem Solving course: Use of upper and lower bounds when estimating Use of compound measures and dimensional analysis Use of the Normal distribution Use of spreadsheets when solving financial problems Logarithmic scales and the exponential function Estimating the gradient of curves Use of probability when assessing risk **Noteworthy Critical Maths Content:** Fermi estimation problems Fallacies in statistics and probability Statistical experiments Conditional probability Critical reasoning with mathematics	**Paper 1 – Introduction to Quantitative Reasoning (2 hours)** **Paper 2 – Critical Maths (2 hours)** Source material used and available from mid–March.