



MATHEMATICS - KS5

Year 12

Half Term 1

Pure: surds, indices, simultaneous equations, inequalities, co-ordinate geometry, series, quadratics, curve sketching, transformations, differentiation, integration.

Half Term 2

Pure: factor theorem, factorising cubics, sine and cosine rules, area of a triangle, logs, circle geometry.

Mechanics: vectors, velocity-time graphs, constant acceleration equations, variable acceleration.

Half Term 3

Pure: binomial expansion, radians, geometric series.

Mechanics: connected particles, pulleys, friction, resolving forces, inclined planes.

Half Term 4

Pure: trig graphs, equations and identities.

Statistics: sampling, location, spread, coding, representing data.

Half Term 5

Pure: differentiation and integration.

Statistics: correlation and regression, probability.

Half Term 6

Pure: numerical solutions, proof, functions.

Statistics: discrete probability distributions, binomial distribution, hypothesis testing.

Year 13

Half Term 1

Pure: algebraic fractions, exponentials and logarithms, numerical solutions, Newton Raphson, differentiation, functions, modulus functions, trigonometry, small angle approximations.

Half Term 2

Pure: partial fraction, parametric equations, binomial expansion.

Statistics: regression, correlation, exponential models. Hypothesis testing, normal distribution.

Half Term 3

Pure: differentiation of compound functions, product rule, quotient rule. 3D vectors.

Mechanics: moments, projectiles.

Half Term 4

Pure: integration methods including substitution, integration by parts, numerical integration.

Mechanics: inclined planes.

Half Term 5

Exam preparation.

Half Term 6

Exam preparation.

