MATHEMATICS - KS5

Year 12

Half Term 1

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

Half Term 2

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

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

Half Term 3

binomial expansion, radians, geometric series.

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

Half Term 4

trig graphs, equations and identities.

Year 13

Half Term 1

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

Half Term 2

partial fraction, parametric equations, binomial expansion.

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

Half Term 3

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

moments, projectiles.

Half Term 4

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

inclined planes.