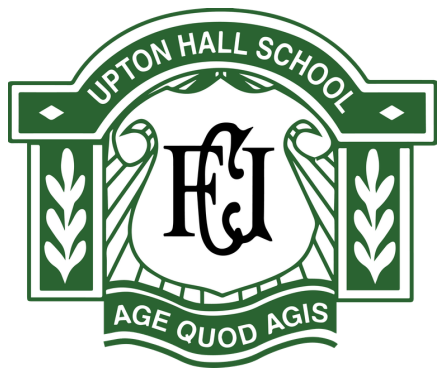




A LEVEL PURE CURRICULUM MAP

YEAR 12

HT 1

Algebra & coordinate geometry

Sketching and transforming graphs (linear, quadratic, cubic and reciprocal) - quadratics and discriminant - factor theorem - algebraic and partial fractions - SLG, circles
Differentiation (polynomials) - differentiation of polynomials, equation of tangents and normal, max/min, optimization problems

HT2

All trigonometry
identities - solving equations - sketching graphs - small angle approximations - reciprocal functions - arcsin and arccos - addition and double angle formulae - $R\sin(x+\alpha)$ - modelling



HT3

Integration (polynomials) - indefinite - areas under curves
Exponentials and logs - exponential functions - the exponential function - modelling - logarithms, laws of logs, equations with logs - natural logs - logs and non-linear data



HT4

Differentiation - sin and cos - exp and logs - chain, product, quotient - trig functions - implicit - rates of change

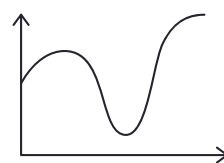
Integration
standard functions and $f(ax+b)$ - using trig identities - inspection/reverse chain rule

$$\frac{dy}{dx} = 0$$

HT5

Integration - substitution - parts - partial fractions - areas under curves - trapezium rule - differential equations

Examinations and culture week



HT6

Numerical methods
locating roots - iteration - Newton-Raphson - modelling

Radian formulae
arc length - areas of sectors and segments

$$\frac{\pi}{2} \text{ radians} = 90^\circ$$

HT 1

Functions
modulus - functions and mappings - composite and inverse - modulus graphs $|f(x)|$ and $f(|x|)$ - modulus problems

Binomial
expanding - partial fractions

$$f(x)$$

HT2

Sequences and series
arithmetic and geometric - sum to infinity - sigma notation - recurrence relations - modelling

NOVEMBER MOCK

Parametrics
equations - using trig identities - sketching - points of intersection - modelling

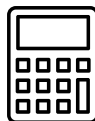
$$\Sigma$$

HT3

Proof
exhaustion, counter-example, contradiction

Vectors
2d and 3d - geometric problems - modelling

JANUARY MOCK



HT4

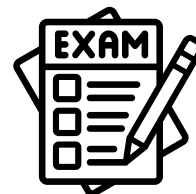
Targeted revision informed by assessment data and mock outcomes.

Students consolidate key topics through revision loops, retrieval quizzes, Tarsia activities, exam-style questions and past paper practice, with a focus on reasoning and exam technique.



HT5

Personalised revision and intervention to address remaining gaps in knowledge. Students develop confidence through retrieval practice, revision loops, Tarsias and full past papers, focusing on exam readiness and performance.



HT6

YEAR 13

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



$$V = \frac{4}{3} \pi r^3$$



A LEVEL APPLIED CURRICULUM MAP



YEAR 12

HT 1

Suvat

SDT graphs, motion in horizontal lines, motion under gravity

$$s = \frac{d}{t}$$

HT2

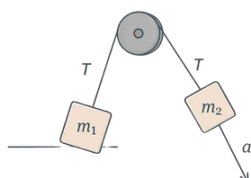
Forces

$F = ma$, resolving forces, coefficient of friction, objects on slopes

$$F = ma$$

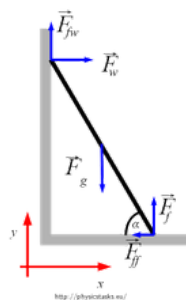
HT3

Forces
Connected particles
Projectiles



HT4

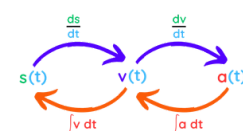
Moments
see-saw problems, ladder problems and forces at hinges



HT5

Vectors and variable acceleration
include use of i and j notation

Examinations and culture week



HT6

Statistical Sampling
population and sampling

Simple random sample



HT 1

Statistical distributions
probability distributions, binomial pd and cd

Measures of location and spread
averages, quartiles and percentiles, variance and standard deviation, coding

Normal distribution
finding probabilities, inverse normal, finding mean and standard deviation, approximating binomial, hypothesis testing and critical regions

HT2

Probability
set notation, venn diagrams, mutually exclusive and independent, conditional probability (including with normal distribution)

CHRISTMAS ASSESSMENT

$$P(B|A) = \frac{P(A \cap B)}{P(A)}$$

HT3

Binomial distribution
hypothesis testing
one tailed, two tailed, critical regions

Correlation and regression
linear and exponential regression, PMCC, correlation hypothesis testing

Representations of data
outliers, box plots, cumulative frequency graphs, histograms

HT4

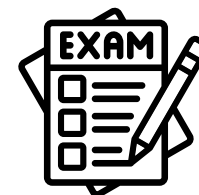
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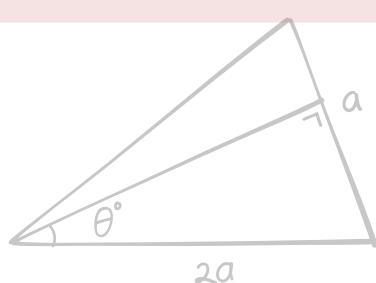
HT5

Personalised revision and intervention to address remaining gaps in knowledge. Students develop confidence through retrieval practice, revision loops, Tarsias and full past papers, focusing on exam readiness and performance.



HT6

YEAR 13



$$\Delta ABC = \frac{1}{2} ab \sin C$$

$$V = \frac{4}{3} \pi r^3$$

