

This document is split into 4 sections: Year 12 A level maths; Year 13 A level maths; Year 12 Further Maths; Year 13 Further Maths

Student Knowledge and Skills Tracker for Year 12 A level Mathematics

Year 12

Term 1 Phase 1:	Check 1	Check 2	Final check
Pure1 Chapter 12-Differentiation. I can:			
Find the derivative, $f'(x)$ or dy/dx — of a simple function			
Use the derivative to solve problems involving gradients, tangents and normals			
Identify increasing and decreasing functions			
Find the second order derivative			
Find stationary points of functions and determine their nature			
Sketch the gradient function of a given function			
Model real-life situations with differentiation			
Pure 1 Chapter 2 Quadratics. I can:			
Solve quadratic equations using factorisation, the quadratic formula and completing the square			
Read and use $f(x)$ notation when working with functions			
Sketch the graph and find the turning point of a quadratic function			
Find and interpret the discriminant of a quadratic expression			
Statistics and Mechanics 1. Chapter 1 Data collection I can:			

Understand 'population', 'sample' and 'census', and comment on the advantages and disadvantages of each			
Understand the advantages and disadvantages of simple random sampling, systematic sampling, stratified sampling, quota sampling and opportunity sampling			
Define qualitative, quantitative, discrete and continuous data, and understand grouped data			
Understand the large data set and how to collect data from it, identify types of data and calculate simple statistics			
Statistics and Mechanics 1. Chapter 2 Measures of spread and location. I can:			
Calculate measures of central tendency such as the mean, median and mode			
Calculate measures of location such as percentiles and deciles			
Calculate measures of spread such as range, interquartile range and interpercentile range			
Calculate variance and standard deviation			
Understand and use coding			

Term 1 Phase 2:	Check 1	Check 2	Final check
Pure 1 Chapter 3 Equations and inequalities. I can:			
Solve linear simultaneous equations using elimination or substitution			
Solve simultaneous equations: one linear and one quadratic			

Interpret algebraic solutions of equations graphically			
Solve linear inequalities			
Solve quadratic inequalities			Solve quadratic inequalities
Interpret inequalities graphically			
Represent linear and quadratic inequalities graphically			
Pure 1 Chapter 4 Graphs and transformations. I can:			
Sketch cubic graphs			
Sketch quartic graphs			
Sketch reciprocal graphs			
Use intersection points of graphs to solve problems			
Translate graphs			
Sketch graphs			
Transform graphs of unfamiliar functions			
Statistics and Mechanics 1 Chapter 3 Representations of data. I can:			
Identify outliers in data sets			
Draw and interpret box plots			
Draw and interpret cumulative frequency diagrams			
Draw and interpret histograms			
Statistics and Mechanics 1 Chapter 4 Correlation and regression. I can:			
Draw and interpret scatter diagrams for bivariate data			
Interpret correlation and understand that it does not imply causation			
Interpret the coefficients of a regression line equation for bivariate data			

Understand when you can use a regression line to make predictions			
Statistics and Mechanics 1 Chapter 5 Probability. I can:			
Calculate probabilities for single events			
Draw and interpret Venn diagrams			
Understand mutually exclusive and independent events, and determine whether two events are independent			
Use and understand tree diagrams			

Term 2 Phase 1:	Check 1	Check 2	Final check
Pure 1 Chapter 5 Straight line graphs. I can:			
Understand the link between the equation of a line, and its gradient and intercept			
Find the equation of a line given (i) the gradient and one point on the line or (ii) two points on the line			
Find the point of intersection for a pair of straight lines			
Know and use the rules for parallel and perpendicular gradients			
Solve length and area problems on coordinate grids			Solve quadratic inequalities
Use straight line graphs to construct mathematical models			
Pure 1 Chapter 13 Integration. I can:			
Find the integral of a polynomial			
Find $f(x)$, given $f'(x)$ and a point on the curve			
Evaluate a definite integral			
Find the area bounded by a curve and the x-axis			

Find areas bounded by curves and straight lines			
Pure 1 Chapter 1 Algebraic methods. I can:			
Multiply and divide integer powers			
Expand a single term over brackets and collect like terms			
Expand the product of two or three expressions			
Factorise linear, quadratic and simple cubic expressions			
Know and use the laws of indices			
Simplify and use the rules of surds			
Statistics and Mechanics 1 Chapter 6 Statistical distributions. I can:			
Understand and use simple discrete probability distributions including the discrete uniform distribution			
Understand the binomial distribution as a model and comment on appropriateness			
Calculate individual probabilities for the binomial distribution			
Calculate cumulative probabilities for the binomial distribution			
Statistics and Mechanics 1 Chapter 7 Hypothesis tests. I can:			
Understand the language and concept of hypothesis testing			
Understand that a sample is used to make an inference about a population			
Find critical values of a binomial distribution using tables			
Carry out a one-tailed test for the proportion of the binomial distribution and interpret the results			

Carry out a two-tailed test for the proportion of the binomial distribution and interpret the results			
---	--	--	--

Term 2 Phase 2:	Check 1	Check 2	Final check
Pure 1 Chapter 7 Algebraic methods. I can:			
Cancel factors in algebraic fractions			
Divide a polynomial by a linear expression			
Use the factor theorem to factorise a cubic expression			
Construct mathematical proofs using algebra			
Use proof by exhaustion and disproof by counter-example			
Pure 1 Chapter 6 Circles. I can:			
Find the mid-point of a line segment			
Find the equation of the perpendicular bisector to a line segment			
Know how to find the equation of a circle			
Solve geometric problems involving straight lines and circles			
Use circle properties to solve problems on coordinate grids			
Find the angle in a semicircle and solve other problems involving circles and triangles			
Statistics and Mechanics 1 Chapter 8 Modelling in mechanics. I can:			
Understand how the concept of a mathematical model applies to mechanics			
Understand and be able to apply some of the common assumptions used in mechanical models			

Know SI units for quantities and derived quantities used in mechanics			
Know the difference between scalar and vector quantities			
Statistics and Mechanics 1 Chapter 9 Constant acceleration. I can:			
Understand and interpret displacement-time graphs			
Understand and interpret velocity-time graphs			
Derive the constant acceleration formulae and use them to solve problems			
Use the constant acceleration formulae to solve problems involving vertical motion under gravity			
Statistics and Mechanics 1 Chapter 10 Forces and Motion. I can:			
Draw force diagrams and calculate resultant forces			
Understand and use Newton's first law			
Calculate resultant forces by adding vectors			
Understand and use Newton's second law, $F = ma$			
Apply Newton's second law to vector forces and acceleration			
Understand and use Newton's third law			
Solve problems involving connected particles			

Term 3 Phase 1:	Check 1	Check 2	Final check
Pure 1 Chapter 9: Trigonometric ratios. I can:			
Use the cosine rule to find a missing side or angle			
Use the sine rule to find a missing side or angle			

Find the area of a triangle using an appropriate formula			
Solve problems involving triangles			
Sketch the graphs of the sine, cosine and tangent functions			Solve quadratic inequalities
Sketch simple transformations of these graphs			
Pure 1 Chapter 10: Trigonometric identities and equations. I can:			
Know the exact trigonometric ratios for 30°, 45° and 60°			
Know and use the relationships $\tan x = \frac{\sin x}{\cos x}$ and $\sin^2 x + \cos^2 x = 1$			
Solve simple trigonometric equations of the form $\sin x = k$, $\cos x = k$ and $\tan x = k$			
Solve more complicated trigonometric equations of the forms $\sin(nx) = k$ and $\sin(\theta \pm a) = k$ and equivalent equations involving \cos and \tan			
Solve trigonometric equations that produce quadratics			
Pure 1 Chapter 8: The binomial expansion. I can:			
Use Pascal's triangle to identify binomial coefficients and use them to expand simple binomial expressions			
Use combinations and factorial notation			
Use the binomial expansion to expand brackets			
Find individual coefficients in a binomial expansion			
Make approximations using the binomial expansion			
Pure 1 Chapter 11: Vectors. I can:			
Use vectors in two dimensions			
Use column vectors and carry out arithmetic operations on vectors			

Calculate the magnitude and direction of a vector			
Understand and use position vectors			
Use vectors to solve geometric problems			
Understand vector magnitude and use vectors in speed and distance calculations			
Use vectors to solve problems in context			
Statistics and Mechanics 1 Chapter 11 Variable acceleration. I can:			
Understand that displacement, velocity and acceleration may be given as functions of time			
Use differentiation to solve kinematics problems			
Use calculus to solve problems involving maxima and minima			
Use integration to solve kinematics problems			
Use calculus to derive constant acceleration formulae			

Term 3 Phase 2:	Check 1	Check 2	Final check
Pure 1 Chapter 14: Exponentials and logarithms. I can:			
Sketch graphs of the form $y = a^x$, $y = e^x$ and transformations of these graphs			
Differentiate e^{kx} and understand why this result is important			
Use and interpret models that use exponential functions			
Recognise the relationship between exponents and logarithms			
Recall and apply the laws of logarithms			
Solve equations of the form $a^x = b$			

Describe and use the natural logarithm function			
Use logarithms to estimate the values of constants in non-linear			
Pure 2 Chapter 1: Algebraic methods. I can:			
Multiply and divide two or more algebraic fractions			
Add or subtract two or more algebraic fractions			
Convert an expression with linear factors in the denominator into partial fractions			
I Convert an expression with repeated linear factors in the denominator into partial fractions			
Divide algebraic expressions			
Convert an improper fraction into partial fraction form			
Pure 2 Chapter 2: Functions and graphs. I can:			
Understand and use the modulus function			
Understand mappings and functions, and use domain and range			
Combine two or more functions to make a composite function			
Know how to find the inverse of a function graphically and algebraically			
Sketch the graphs of the modulus functions $y = \begin{matrix} \square \\ \square \end{matrix}$ and $y = f(x)$			
Apply a combination of two (or more) transformations to the same curve			
Transform the modulus function			
Pure 2 Chapter 3: Sequences and series. I can:			
Find the nth term of an arithmetic sequence			
Prove and use the formula for the sum of the first n terms of an arithmetic series			

Find the nth term of a geometric sequence			
Prove and use the formula for the sum of a finite geometric series			
Prove and use the formula for the sum to infinity of a convergent geometric series			
Use sigma notation to describe series			
Generate sequences from recurrence relations			
Model real-life situations with sequences and series			

Student Knowledge and Skills Tracker for Year 13 A' Level Mathematics

Year 13

Term 1 Phase 1:	Check 1	Check 2	Final check
Pure 2 Chapter 4 Binomial expansion (2). I can:			
Expand $(1 + x)^n$ for any rational constant n and determine the range of values of x for which the expansion is valid			
Expand $(a + bx)^n$ for any rational constant n and determine the range of values of x for which the expansion is valid			
Use partial fractions to expand fractional expressions			
Pure 2 Chapter 5 Radians. I can:			
Convert between degrees and radians and apply this to trigonometric graphs and their transformations			
State exact values of angles measured in radians			
Find an arc length using radians			
Find areas of sectors and segments using radians			
Solve trigonometric equations in radians			
Use approximate trigonometric values when the angle is small			
Pure 2 Chapter 6 Trigonometric functions. I can:			
Understand the graphs of secant, cosecant and cotangent and their domain and range			
Simplify expressions, prove simple identities and solve equations involving secant, cosecant and cotangent			
Prove and use $\sec^2x = 1 + \tan^2x$ and $\operatorname{cosec}^2x = 1 + \cot^2x$			

Understand and use inverse trigonometric functions and their domain and ranges			
Pure 2 Chapter 9 Differentiation. I can:			
Differentiate trigonometric functions			
Differentiate exponentials and logarithms			
Differentiate functions using the chain, product and quotient rules			
Differentiate parametric equations			
Differentiate functions which are defined implicitly			
Use the second derivative to describe the behaviour of a function			
Solve problems involving connected rates of change and construct simple differential equations			

Term 1 Phase 2:	Check 1	Check 2	Final check
Pure 1 Chapter 7 Trigonometry and modelling. I can:			
Prove and use the addition formulae			
Understand and use the double-angle formulae			
solve trigonometric equations using the double-angle and addition formulae			
Write expressions of the form $a \cos x \pm b \sin x$ in the forms $R \cos(x \pm a)$ or $R \sin(x \pm Q)$			
Use trigonometric functions to model real-life situations			Solve quadratic inequalities
Pure 2 Chapter 8 Parametric equations I can:			
Convert parametric equations into Cartesian form by substitution			
Convert parametric equations into Cartesian form using trigonometric identities			

Understand and use parametric equations of curves and sketch parametric curves			
Solve coordinate geometry problems involving parametric equations			
Pure 2 Chapter 10 Numerical methods. I can:			
Locate roots of $f(x) = 0$ by considering changes of sign			
Use iteration to find an approximation to the root of the equation $f(x) = 0$			
Use the Newton—Raphson procedure to find approximations to the solutions of equations of the form $f(x) = 0$			
Use numerical methods to solve problems in context			
Pure 2 Chapter 11 Integration. I can:			
Integrate standard mathematical functions including trigonometric and exponential functions			
Integrate functions of the form $f(ax+b)$ by using the reverse chain rule			
Use trigonometric identities in integration			
Use the reverse of the chain rule to integrate more complex functions			
Integrate functions by making a substitution			
Integrate functions by using integration by parts			
Integrate functions by using partial fractions			
Use integration to find the area under a curve			
Use the trapezium rule to approximate the area under a curve			
Solve simple differential equations and model real-life situations with differential equations			

Term 2 Phase 1:	Check 1	Check 2	Final check
Pure 2 Chapter 12 Vectors. I can:			
Understand 3D Cartesian coordinates			
Use vectors in three dimensions			
Use vectors to solve geometric problems			
Model 3D motion in mechanics with vectors			
Statistics and Mechanics 2 Chapter 1 Regression, correlation and hypothesis testing. I can:			Solve quadratic inequalities
Understand exponential models in bivariate data			
Use a change of variable to estimate coefficients in an exponential model			
Understand and calculate the product moment correlation coefficient			
Carry out a hypothesis test for zero correlation			
Statistics and Mechanics 2 Chapter 2 Conditional probability. I can:			
Understand set notation in probability			
Understand conditional probability			
Solve conditional probability problems using two-way tables and Venn diagrams			
Use probability formulae to solve problems			
Solve conditional probability problems using tree diagrams			
Statistics and Mechanics 2 Chapter 4 Moments. I can:			
Calculate the turning effect of a force applied to a rigid body			
Calculate the resultant moment of a set of forces acting on a rigid body			
Solve problems involving uniform rods in equilibrium			

Solve problems involving non-uniform rods			
Solve problems involving rods on the point of tilting			

Term 2 Phase 2:	Check 1	Check 2	Final check
Statistics and Mechanics 2 Chapter 3 The Normal distribution. I can:			
Understand the normal distribution and the characteristics of a Normal distribution curve			
Find percentage points on a standard normal curve			
Find unknown means and/or standard deviations for a normal distribution			
Approximate a binomial distribution using a normal distribution			
Select appropriate distributions and solve real-life problems in context			
Carry out a hypothesis test for the mean of a normal distribution			
Statistics and Mechanics 2 Chapter 5 Forces and friction. I can:			
Resolve forces into components			
Use the triangle law to find a resultant force			
Solve problems involving smooth or rough inclined planes			
Understand friction and the coefficient of friction			
Statistics and Mechanics 2 Chapter 6 Projectiles. I can:			
Model motion under gravity for an object projected horizontally			
Resolve velocity into components			

Solve problems involving particles projected at an angle			
Derive the formulae for time of flight, range and greatest height, and the equation of the path of a projectile			
Statistics and Mechanics 2 Chapter 7 Application of forces. I can:			
Find an unknown force when a system is in equilibrium			
Solve statics problems involving weight, tension and pulleys			
Understand and solve problems involving limiting equilibrium			
Solve problems involving motion on rough or smooth inclined planes			
Solve problems involving connected particles that require the resolution of forces			
Statistics and Mechanics 2 Chapter 8 Further kinematics. I can:			
Work with vectors for displacement, velocity and acceleration when using the vector equations of motion			
Use calculus with harder functions of time involving variable acceleration			
Differentiate and integrate vectors with respect to time			

Term 3 Phase 1 &2: Revision and Examination			
--	--	--	--

Student Knowledge and Skills Tracker for Year 12 – Further Mathematics

Year 12

Term 1 Phase 1:	Check 1	Check 2	Final check
Pure Core Maths 1 Chapter 1: Complex Numbers. I can:			
Understand and use the definitions of imaginary and complex numbers			
Add and subtract complex numbers			
Multiply complex numbers			
Understand the definition of a complex conjugate			
Divide complex numbers			
Solve quadratic equations that have complex roots			
Solve cubic or quartic equations that have complex roots			
Pure Core Maths 1 Chapter 2: Argand Diagrams. I can:			
Show complex numbers on an Argand diagram			
Find the modulus and argument of a complex number			
Write a complex number in modulus-argument form			
Represent loci on an Argand diagram			
Represent regions on an Argand diagram			
Pure Core Maths 1 Chapter 6: Matrices. I can:			
Understand the concept of a matrix			
Define the zero and identity matrices			
Add and subtract matrices			

Multiply a matrix by a scalar			
Multiply matrices			
Calculate the determinant of a matrix			
Find the inverse of a matrix			
Use matrices to solve systems of equations			
Interpret simultaneous equations geometrically			
Further Mechanics 1 Chapter 1: Momentum and Impulse. I can:			
Calculate the momentum of a particle and the impulse of a force			
Solve problems involving collisions using the principle of conservation of momentum			
Use the impulse-momentum principle and the principle of conservation of momentum in vector form			
Further Mechanics 1 Chapter 1: Work Energy and Power. I can:			
Calculate the work done by a force when its point of application moves			
Calculate the kinetic energy of a moving particle and the potential energy of a particle			
Use the principle of conservation of mechanical energy and the work-energy principle			
Calculate the power developed by an engine			

Term 1 Phase 2:	Check 1	Check 2	Final check
Pure Core Maths 1 Chapter7: Linear Transformations. I can:			

Understand the properties of linear transformations and represent them using matrices			
Perform reflections and rotations using matrices			
Carry out enlargements and stretches using matrices			
Find the coordinates of invariant points and the equations of invariant lines			
Carry out successive transformations using matrix products			Solve quadratic inequalities
Understand linear transformations in three dimensions			
Use inverse matrices to reverse linear transformations			
Pure Core Maths 1 Chapter 8: Proof by Induction. I can:			
Understand the principle of proof by mathematical induction and prove results about sums of series			
Prove results about divisibility using induction			
Prove results about matrices using induction			
Pure Core Maths 1 Chapter 3: Series. I can:			
Use standard summation results			
Evaluate and simplify series of the form $\sum f(r)$, where $f(r)$ is linear, quadratic or cubic			
Pure Core Maths 1 Chapter 9: Vectors. I can:			
Understand and use the vector and Cartesian forms of the equation of a straight line in three dimensions			
Understand and use the vector and Cartesian forms of the equation of a plane			
Calculate the scalar product for two 3D vectors			

Calculate the angle between two vectors, two lines, a line and a plane, or two planes			
Understand and use the scalar product form of the equation of a plane			
Determine whether two lines meet and determine the point of intersection			
Calculate the perpendicular distance between: two lines, a point and a line, or a point and a plane			
Further Mechanics 1 Chapter 3: Elastic strings and springs. I can:			
Use Hooke's law to solve equilibrium problems involving elastic strings or springs			
Use Hooke's law to solve dynamics problems involving elastic strings or springs			
Find the energy stored in an elastic string or spring			
Solve problems involving elastic energy using the principle of conservation of mechanical energy and the work—energy principle			
Further Mechanics 1 Chapter 4: Elastic Collisions in one dimension. I can:			
Solve problems involving the direct impact of two particles by using the principle of conservation of momentum and Newton's law of restitution			
Apply Newton's law of restitution to problems involving the direct collision of a particle with a smooth plane surface			
Find the change in energy due to an impact or the application of an impulse			
Solve problems involving successive direct impacts			

Term 2 Phase 1:	Check 1	Check 2	Final check
------------------------	----------------	----------------	--------------------

Pure Core Maths 1 Chapter 5: Volumes of Revolution. I can:			
Find the volume of revolution when a curve is rotated around the x-axis			
Find the volume of revolution when a curve is rotated around the y-axis			
Find more complicated volumes of revolution			
Model real-life objects using volumes of revolution			
Further Mechanics 1 Chapter 5: Elastic Collisions in two dimensions. I can:			
Solve problems involving the oblique impact of a smooth sphere with a fixed surface			
Solve problems involving the oblique impact of two smooth spheres			
Solve problems involving successive oblique impacts of a sphere with smooth plane surfaces			
Further Statistics 1 Chapter 1: Discrete Random Variables. I can:			
Find the expected value of a discrete random variable X			
Find the expected value of X^2			
Find the variance of a discrete random variable			
Use the expected value and variance of a function of X			
Solve problems involving random variables			
Further Statistics 1 Chapter 2: The Poisson distribution. I can:			
Use the Poisson distribution to model real-world situations			

Use the additive property of the Poisson distribution			
Understand and use the mean and variance of the Poisson distribution			
Understand and use the mean and variance of the binomial distribution			
Use the Poisson distribution as an approximation to the binomial distribution			

Term 2 Phase 2:	Check 1	Check 2	Final check
Pure Core Maths 1 Chapter 4: Roots of polynomials. I can:			Solve quadratic inequalities
Derive and use the relationships between the roots of a quadratic equation			
Derive and use the relationships between the roots of a cubic equation			
Derive and use the relationships between the roots of a quartic equation			
Evaluate expressions relating to the roots of polynomials			
Find the equation of a polynomial whose roots are a linear transformation of the roots of a given polynomial			
Further Statistics 1 Chapter 3: Geometric and Negative Binomial distributions. I can:			
Understand and use the geometric distribution			
Calculate and use the mean and variance of the geometric distribution			
Understand and use the negative binomial distribution			

Calculate and use the mean and variance of the negative binomial distribution			
Further Statistics 1 Chapter 4: Hypothesis testing. I can:			
Use hypothesis tests to test for the mean λ of a Poisson distribution			
Find critical regions of a Poisson distribution using tables			
Use hypothesis tests to test for the parameter p in a geometric distribution			
Find critical regions of a geometric distribution			
Term 3 Phase 1:	Check 1	Check 2	Final check
Further Statistics 1 Chapter 6: Chi Squared tests: I can:			
Form hypotheses about how well a distribution fits as a model for and observed frequency distribution			
Measure the goodness of fit of a model to observed data			
Understand the degrees of freedom and use the chi-squared family of distributions			
Be able to test a hypothesis for goodness of fit (for discrete distributions) and by using contingency tables			
Further Statistics 1 Chapter 7: Probability generating functions: I can:			Solve quadratic inequalities
Understand and use probability generating functions			
Derive and use probability generating functions for standard distributions			
Derive the formulae for the mean and variance of a distribution using probability generating functions			

Use probability generating functions to find the mean and variance of a distribution			
Know the probability generating function of the sum of independent random variables			

Term 3 Phase 2:	Check 1	Check 2	Final check
Pure Core Maths 2 Chapter 1: Complex numbers. I can:			
Express a complex number in exponential form			
Multiply and divide complex numbers in exponential form			
Understand de Moivre's theorem			
Use de Moivre's theorem to derive trigonometric identities			
Use de Moivre's theorem to find sums of series			
Further Statistics 1 Chapter 5: The Central limit theorem(and the Normal distribution) I can:			
Find probabilities using the Normal distribution			
Solve problems using the inverse Normal distribution			
Understand the standard Normal distribution			
Use the standard Normal distribution to find the unknown mean and standard deviation			

Student Knowledge and Skills Tracker for Year 13 A' Level Further Mathematics

Year 13

Term 1 Phase 1:	Check 1	Check 2	Final check
Pure Core Maths 2 Chapter 1: Complex numbers. I can:			
Know how to solve completely equations of the form $z^n - a - ib = 0$, giving special attention to cases where $a = 1$ and $b = 0$			
Use complex roots of unity to solve geometric problems			
Pure Core Maths 2 Chapter 2: Series. I can:			
Understand and use the method of differences to sum finite series			
Find and use higher derivatives of functions			
Know how to express functions as an infinite series in ascending powers using Maclaurin series expansion			
Be able to find the series expansions of compound functions			
Pure Core Maths 2 Chapter 3: Methods in calculus. I can:			
Evaluate improper integrals			
Understand and evaluate the mean value of a function			
Integrate rational functions using trigonometric substitutions			
Integrate using partial fractions			
Further Statistics 1 Chapter 5: The Central limit theorem (and the Normal distribution) I can:			

Understand and apply the central limit theorem to approximate the random variable \bar{X}			
Apply the central limit theorem to other distributions and solve problems			
Further Statistics 1 Chapter 8: Quality of statistical tests. I can:			
Understand type I and type II errors			
Find type I and type II errors using the normal distribution			
Calculate the size and power of a test			
Draw a graph of the power function for a test			

Term 1 Phase 2:	Check 1	Check 2	Final check
Pure Core Maths 2 Chapter 4: Volumes of revolution. I can:			
Find volumes of revolution around the x-axis			
Find volumes of revolution around the y-axis			
Find volumes of revolution for curves defined parametrically			
Model real-life applications of volumes of revolution			
Pure Core Maths 2 Chapter 5: Polar coordinates. I can:			
Understand and use polar coordinates			
Convert between polar and Cartesian coordinates			
Sketch curves with r given as a function of θ			
Find the area enclosed by a polar curve			
Find tangents parallel to, or at right angles to, the initial line			
Pure Core Maths 2 Chapter 6: Hyperbolic functions. I can:			

Understand the definitions of hyperbolic functions			
Sketch the graphs of hyperbolic functions			
Understand and use the inverse hyperbolic functions Prove identities and solve equations using hyperbolic functions			
Differentiate and integrate hyperbolic functions			

Term 2 Phase 1:	Check 1	Check 2	Final check
Pure Core Maths 2 Chapter 7: Methods in differential equations. I can:			
Solve first order differential equations using an integrating factor			
Solve second-order homogeneous differential equations using the auxiliary equation			
Solve second-order homogenous differential equations using the complimentary function and particular integral			
Find particular solutions to differential equations using given boundary conditions			

Term 2 Phase 2:	Check 1	Check 2	Final check
Pure Core Maths 2 Chapter 7: Modelling with differential equations. I can:			
Model real-life situations with first-order differential equations			
Use differential equations to model simple harmonic motion			
Model damped and forced oscillations using differential equations			

Model real-life situations using coupled first-order differential equations			
---	--	--	--

Term 3 Phase 1 &2: Revision and Examinations			
---	--	--	--