Calculate the volume and surface area of pyramids, cones and spheres.	Work with the frustum of a cone.
Calculate the volume of composite shapes.	Use vectors, describing magnitude and direction.
Draw and read from a Histogram.	Use a tree-diagram for probability without replacement.
Know and work with appropriate sampling techniques.	Calculate probability using the And/Or rules.
Understand and use the bounds of measure.	Understand what a function of the form $f(x)=a^x$ would describe.
Write full solutions, providing appropriate detail.	Move elegantly through problems, using knowledge of mathematics as required.

UNITED KINGDOM OF
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AND NORTHERN IRELAND

PASSPORT

TO GCSE GRADES A/A*

~*~

Name: _____

Mr Slack

Use fractional and Negative Powers.	Manipulate surds, including multiplying out a bracket involving surds.	Solve quadratic inequalities.	Transform the graphs of functions.
Rationalise the denominator.	Write a quadratic as a difference of two squares.	Sketch and use trigonometric functions.	Solve non-linear simultaneous equations.
Complete the square and understand what this will find you.	Solve quadratics using factorisation.	Simplify algebraic fractions.	Solve equations involving algebraic fraction (with quadratics).
Solve quadratics using the quadratic formula.	Change the subject of an equation.	Calculate arc length and sector area.	Use Pythagoras' theorem with irrational lengths.
Solve problems involving direct and indirect proportionality.	Use and know the equation of a circle.	Use Pythagoras' theorem in 3-dimensions.	Use Trigonometry in 3-dimensions.
Identify features of a quadratic graph.	Sketch and identify features of graphs with different orders.	Use the Sine and Cosine rules.	Calculate the Area of a Triangle using ½ab sinC