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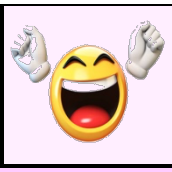
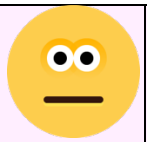
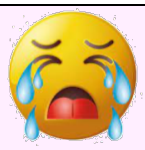
OCR Additional Maths Topic Checklist

1 calculator paper

Topics				
Algebra				
Surds recap				
Indices recap				
Quadratics recap • Factorising • Solving • Completing The Square • Simultaneous equations				
Re-arranging equations to make the subject Recap				
Algebraic fractions recap • Simplifying fractions • Adding/Subtracting • Multiplying/Dividing				
Forming Equations – linear, quadratic and cubic				
Solving inequalities – linear (including graphically via shading) recap				
Solving inequalities – quadratic recap				
Factor Theorem				
Polynomial Division				
Solving Cubics				
Recurrence relationships (including in modelling)				
Binomial expansion				
Probability				
Tree diagrams				
Venn diagrams				
Product rule				
Two-Way tables				
Permutations				
Combinations				
Coordinate Geometry				
Gradients recap				
Intercepts recap				
Distance between two points recap				
Midpoint recap				
Sketching functions – linear, quadratic,cubic, exponential and trig				
Equation of a straight line (drawing and finding)				
Circles				
Linear programming – forming inequalities and shading in order to optimise)				
Trigonometry				
Finding exact values of sin, cos and tan for any angle				
Sine and cosine rule (including ambiguous case)				
Area of any triangle				
Pythagoras in 2D and 3D				
Trig graphs				
Trig identities $sin^2x + \cos^2 x = 1$ and $\tan x = \frac{\sin x}{\cos x}$				
Solving trig equations $sin^2x + \cos^2 x = 1$ and $\tan x = \frac{\sin x}{\cos x}$				
Calculus				
Basic differentiation (technique and finding gradients or points where gradients occur)				
Equations of tangents and normals				
Increasing/decreasing functions				
Second derivative				
Stationary points				
Classifying maximum and minimum				
Sketching a curve based on max and min points				
Basic integration				
Definite versus indefinite integrals				
Area under curve and between two curves				
Kinematics (using differentiation and integration to find displacement, velocity acceleraton)				
Numerical Methods				
Solve equations by considering change of signs				
Iteration to solve equations and knowing when thse fail				
Using tangents to estimate gradients of a curve and how to improve estimates				
Using rectangles and trapezia to estimate the area under a curve (including over and under estimate knowledge)				
Exponentials and Logarithms				
Exponential and log graphs				
Log rules/properties (index, multiplication, division, power and change of base)				
Converting an exponential to a linear form				
Solving exponentials				
Exponential modelling – growth and decay				