Edexcel iGCSE Further Maths Topic Checklist

2 calculator papers

Topics	😄	😐	😭	🤔
Quadratics				
Factorise				
Complete the square				
Quadratic formula				
Forming quadratic equations based on the roots				
Surds				
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				
Further Algebra				
Factor and remainder theorem				
Polynomial division				
Simultaneous equations (1 linear and 1 quadratic)				
Solving cubics				
Inequalities – linear and quadratic				
Graphs of linear inequalities (shading)				
Binomial Expansion				
Graphs				
Graphs of linear, quadratic, cubic and rational functions				
Solving graphically				
Series				
$\sum$ notation				
Arithmetic and geometric series				
Scalar and vector quantities				
Addition and subtraction of vectors				
Comparing components of vectors				
Magnitude of a vector				
Position vector				
Unit vector				
Geometry - parallel lines and collinearity				
Rectangular Cartesian Coordinates (straight line graphs)				
Distance				
Point dividing a line in a given ratio				
Gradients				
Equation of a straight line (drawing and finding the equation)				
Parallel and perpendicular lines				
Calculus				
Differentiation of polynomials, trig and exponentials $x^n, \frac{1}{x}, \sin ax, \cos ax, e^{ax}$)				
Integration of polynomials, trig and exponentials $x^n, \sin ax, \cos ax, e^{ax}$))				
Product and quotient rule				
Kinematics				
Stationary and turning points				
Maxima and minima				
Equations or tangents and normals				
Rates of change and connected rates of change				
Trigonometry				
Degrees and radians				
Arc length and Area of a sector				
Finding values of sin, cos and tan for any angle				
Angles between a line and a plane and between 2 planes				
Sine and cosine rule formula				
Pythagoras in 2D and 3D				
Trig graphs				
Trig identities - $sin^2x + \cos^2 x = 1, \tan x = \frac{\sin x}{\cos x}$				
Trig identities - $\sin(a \pm b), \cos(a \pm b), \tan(a \pm b)$				
Solving trig equations				