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GCSE/iGCSE Maths Topic Checklist

The iGCSE (iGCSE A) exam is more formulaic and requires less problem-solving skills than GCSE. There is a lot of solving and practical application of Maths in GCSE unlike iGCSE where there are many calculation-style questions. The questions are more routine in iGCSE due to the fact that this is an international exam where English is not the first language of most students. There is a formula sheet provided for the iGCSE exam whereas there is no formula sheet for the GCSE exam and students must have all formulae memorised. There is no coursework in either course.

It should not really be a question of whether there are more or less topics in Edexcel iGCSE than GCSE since GCSE has topics which are not included in iGCSE and vice versa and the difficulty level doesn't stem from this. There are actually more topics in GCSE and they are studied in greater depth and application. A significant chunk of marks are allocated to functional and problem-solving questions that many students seem to find hard to prepare for. Edexcel iGCSE has less topics, but does contain some additional challenging contents (such as basic calculus) that one would have to learn if they aspired to a level 9 grade and there is more actual maths involved (e.g. solving equations), but this can be prepared for well with practice and memorising/following set methods.

Note: There is also an Edexcel B course aimed at more international institutions and I have never encountered someone in the UK taking it. It has extra topics than Edexcel A which include matrices, factor theorem, algebraic division and factorising a cubic. It is only available at higher tier.

Topics	GCSE	iGCSE A
Grade 1 (Low F or G 10%)		
Addition of integers and decimals		
Subtraction of integers and decimals		
Multiplication of integers and decimals		
Division of integers and decimals		
Ordering integers and decimals		
Reading scales		
Fractions- writing, simplifying and ordering		
Rounding		
Place value		
Time		
Coordinates		
Names of polygons		
Names of angles		
Tally charts		
Pictograms		
Negative numbers		
Powers and roots		
Factors and Multiples		
BIDMAS		
Grade 2 (Low E or High F 15%)		
Calculation money problems		
Fractions of an amount		
Fractions, decimals and percentages (converting between)		
Algebra – collecting like terms (adding and multiplying)		
Estimation		
Function machines		
Perimeter and area (squares, rectangles, trapezium, parallelograms and triangles)		
Probability – scales		
Frequency polygons		
Calculating averages from lists (mean, median)		
Bar charts		
Stem and leaf		
Pie charts		
Systematic listing strategies		
Grade 3 (D or E 20%)		
Error intervals		
Fractions – adding, subtracting, multiplying and dividing		
Ratio – writing as a fraction and simplifying		
Proportion – recipes and ingredients		
Ratio – sharing		
Percentages- finding percentages of amounts		
Percentages - increase/decrease		
Percentage change		
Exchange rate		

Conversions and units		
Scale drawings		
Best buy questions		
Number substitution		
Solving linear equations (including with an unknown on both sides)		
Drawing graphs – plugging into tables and plotting the points		
Area and circumference of circles		
Area of compound shapes		
Calculating averages from lists (lower quartile, upper quartile and IQR)		
Frequency tables		
Two-Way tables		
Transformations of shapes (reflections, enlargements rotations and translations)		
Grade 4 (Low C 25%)		
Compound interest and depreciation		
Indices - basics		
HCF and LCM		
Prime factor trees		
Real life graphs		
Distance time graphs		
Inequalities - representing on a number line		
Inequalities – solving equations		
Forming and solving equations		
Sequences generating – geometric, arithmetic, triangular, square, Fibonacci		
Sequences (nth term)		
Expanding single and double brackets		
Factorising		
Angles in parallel lines		
Angles in polygons		
Surface area (prisms and cylinders)		
Volume (prism and cylinders)		
Loci and construction		
Bearings		
Plans and elevations		
Calculating averages in frequency tables - mean		
Calculating averages in frequency tables - median		
Probability Basics		
Scatter graphs and correlation		
Pythagoras		
Grade 5 (low B or high C 30%)		
Ratio – writing ratios as fractions		
Ratio – writing ratios as linear functions (when given 2 ratios)		
Reverse percentages		
Standard form		
Speed and density		
Changing the subject of a formula		
Factorising quadratics (product sum and difference of two squares)		
Solving quadratics		
Drawing quadratic graphs		
Other graphs – cubic, reciprocal		
Using graphs to solve equations (quadratics and cubics)		
Simultaneous equations		
Using graphs to solve simultaneous equations		
Straight line graphs - gradient, midpoint equation etc		
Surface area and volume of spheres and cones		
Volume - frustrums		
Sectors - area and arc length		
Similar shapes (lengths)		
SOHCAHTOA		
Congruent shapes		
Exact trig values		
Probability trees		
Venn diagrams		
Vectors		
Vectors - Modulus		
Grade 6 (High B 45%)		
Recurring decimals to fractions		
Product rule for counting		
Repeated percentage change		
Indices – fractions and negative powers		
Expanding triple brackets		
Straight line graphs - parallel and perpendicular lines		
Straight line graphs – finding areas under the graph		
Inequalities on graphs - shading		

Similar shapes (area and volume)		
Enlargements – negative scale factor		
Circle theorems – 8 theorems		
Circle theorems – 2 intersecting chords and secants theorem		
Cumulative frequency		
Box plots		
Ratio – capture recapture		
Grade 7 (Low A 55%)		
Tree diagrams – conditional probability with algebra		
Probability– conditional probability with algebra		
Venn Diagrams (given that questions)		
Surds		
Factorising harder quadratics (AC method and grouping)		
Direct and inverse proportion		
Bounds		
Other graphs – trig and exponential		
Exponential functions and exponential growth		
Algebraic Fractions		
Re-arranging harder formulae		
Functions – inverse and composite		
Functions – domain and range		
Iteration		
Area under a graph		
Sine cosine rule		
Area of any triangle		
3D Pythagoras		
Rates of change and tangents to curves to estimate gradients		
Differentiation (techniques and stationary points)		
Histograms		
Grade 8/9 (8 = Low A* or high A 70%, 9 = high A* 85%)		
Quadratic simultaneous equations		
Surface area and volume of spheres, cones and cylinders with algebra		
Sine/cosine rule with algebra		
Differentiation (optimisation and kinematics)		
Sum of n terms of an arithmetic series		
Ratio with algebra		
Transforming curves		
Proof – circle theorems, since cosine rule and quadratic formula		
Completing the square		
nth term of a quadratic sequence		
Quadratic inequalities		
Velocity time graphs		
Equation of a tangent to a circle		
Vector proof questions		