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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
1)	2D shapes - area and perimeter (squares, rectangles, trapezium, parallelograms and triangles)		
2)	2D shapes - area of compound shapes		
3)	3D shapes - surface area and volume of spheres, cones and frustrums (including with algebra)		
4)	3D shapes - Volume of frustrums		
5)	3D Pythagoras		
6)	Addition of integers		
7)	Algebraic fractions		
8)	Algebra – collecting like terms (adding and multiplying)		
9)	Angles in parallel lines		
10)	Angles in polygons		
11)	Area of any triangle		
12)	Area under a graph		
13)	Bar charts		
14)	Basic Probability– conditional probability with algebra		
15)	Bearings		
16)	Best buy questions		
17)	BIDMAS		
18)	Bounds		
19)	Box plots		
20)	Calculation money problems		
21)	Circles – area and perimeter		
22)	Circle theorems – 8 theorems		
23)	Circle theorems – 2 intersecting chords and secants theorems		
24)	Completing the square		
25)	Congruent shapes		
26)	Conversions and units		
27)	Coordinates		
28)	Cumulative frequency		
29)	Decimals – addition, subtraction, multiplication and division		
30)	Decimals - recurring decimals to fractions		
31)	Differentiation – basics, stationary/turning points (max and min), optimisation and kinematics		
32)	Direct and inverse proportion		
33)	Distance and velocity time graphs		
34)	Division of integers		
35)	Drawing graphs by plugging into tables and plotting the points		
36)	Drawing quadratic graphs		
37)	Enlargements – negative scale factor		
38)	Error intervals		
39)	Estimating		
40)	Exchange rate		
41)	Expanding brackets (including triple brackets)		
42)	Exponential functions and exponential growth		
43)	Factorising		
44)	Factors and Multiples		
45)	Forming and solving equations		
46)	Fractions – adding, subtracting, multiplying and dividing		
47)	Fractions of an amount		
48)	Fractions- writing, simplifying and ordering		
49)	Fractions, decimals and percentages (converting between)		
50)	Frequency Polygons		

51)	Frequency tables		
52)	Function machines		
53)	Functions – inverse and composite		
54)	Functions – domain and range		
55)	HCF and LCM		
56)	Histograms		
57)	Indices		
58)	Indices – fractions and negative powers		
59)	Inequalities – representing on a number line		
60)	Inequalities – solving equations		
61)	Inequalities on graphs – shading		
62)	Inequalities - quadratics		
63)	Iteration		
64)	Loci and construction		
65)	Averages - Mean (lists and frequency tables), median (lists), lower and upper quartile (lists)		
66)	Averages - frequency tables (median)		
67)	Multiplication of integers		
68)	Names of angles		
69)	Names of Polygons		
70)	Negative numbers		
71)	Number Substitution		
72)	Other graphs – cubic, reciprocal		
73)	Other graphs – trig/exponential		
74)	Percentage change		
75)	Percentages - compound interest and depreciation		
76)	Percentages- finding percentages of amounts		
77)	Percentages – increase/decrease		
78)	Percentages – repeated percentage change		
79)	Percentages – reverse percentages		
80)	Pictograms		
81)	Pie charts		
82)	Place value		
83)	Plans and elevations		
84)	Powers and roots		
85)	Prime factor trees		
86)	Probability basics		
87)	Probability trees		
88)	Probability tree diagrams – conditional probability with algebra		
89)	Product rule for counting		
90)	Proofs – circle theorems, since cosine rule and quad formula		
91)	Proportion – recipes and ingredients		
92)	Pythagoras		
93)	Rates of change and tangents to curves to estimate gradients		
94)	Ratio – capture recapture		
95)	Ratio – writing as a fraction and simplifying		
96)	Ratio – writing ratios as fractions		
97)	Ratio – writing ratios as linear functions (when given 2 ratios)		
98)	Ratio – sharing		
99)	Ratio – with algebra		
100)	Re-arranging formulae (changing the subject)		
101)	Reading scales		
102)	Real life graphs - interpreting		
103)	Rounding		
104)	Scale drawings		
105)	Scatter graphs and correlation		
106)	Sectors - area and arc length		
107)	Sequences generating – geometric, arithmetic, triangular, square, Fibonacci)		
108)	Sequences - nth term of a linear sequence (common difference)		
109)	Sequences - nth term of a quadratic sequence		
110)	Sum of n terms of an arithmetic series		
111)	Similar shapes (lengths)		
112)	Similar shapes (area and volume)		
113)	Simultaneous equations - linear		
114)	Simultaneous equations - quadratic		
115)	Simultaneous equations graphically		
116)	Sine cosine rule (including with algebra)		
117)	SOHCAHTOA		
118)	Solving linear equations		
119)	Solving quadratics		
120)	Speed and density		
121)	Standard form		
122)	Stem and leaf		
123)	Straight line graphs - gradient, midpoint equation etc		
124)	Straight line graphs - parallel and perpendicular lines		
125)	Straight line graphs – finding areas under the graph		

126)	Subtraction of integers and decimals		
127)	Systematic listing strategies		
128)	Surds		
129)	Tangent equation to a circle + circle equation centre (0,0)		
130)	Time		
131)	Transformations of shapes (reflections, enlargements rotations and translations)		
132)	Transforming curves		
133)	Trig Values – exact		
134)	Two-way tables		
135)	Using graphs to solve equations (quadratics and cubics)		
136)	Vectors		
137)	Vectors - modulus		
138)	Vector - proof questions		
139)	Venn diagrams		