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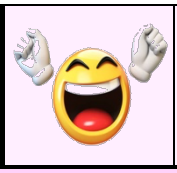
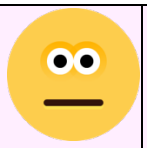
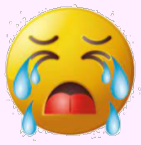
iGCSE Maths Topic Checklist

The grade boundaries have been given as percentages below, but these are not set in stone. Boundaries fluctuate depending on how hard everyone found the papers for that particular year. For a particular grade you need to be able to do the topics for that grade plus all the topics for the grades below.

GCSEs are offered at foundation and higher tiers. The foundation paper caps grades at Grade 5. The higher paper has a minimum grade of Grade 4, with anything under that becoming ungraded. So, most of a higher paper will be inaccessible to someone who's doubtful achieving grade 4. In the exam papers, there are some questions which overlap because everyone learns some of the same content – higher tier students learn what foundation tier students do plus extra. Foundation tier courses will therefore have less content and only content up until a grade 5. Approximately 50% of the marks on a higher paper are aimed at grade 7 and above which is the usual requirement for entry onto an A level maths course.

iGCSE Topics				
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 and median)				
Bar charts				
Stem and leaf				
Pie charts				
Grade 3 (D or E 20%)				
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				

Frequency 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 (nth term of linear sequences)				
Expanding single and double brackets				
Factorising				
Angles in parallel lines				
Angles in polygons				
Surface area (prisms and cylinders)				
Volume (prism and cylinders)				
Bearings				
Plans and elevations				
Averages - frequency tables (mean only)				
Probability Basics				
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				
Sectors - area and arc length				
Similar shapes (lengths)				
SOHCAHTOA				
Probability trees				
Venn diagrams				
Vectors (including modulus)				
Grade 6 (High B 45%)				
Recurring decimals to fractions				
Repeated percentage change				
Indices – fractions and negative powers				
Expanding triple brackets				
Straight line graphs - parallel and perpendicular lines				
Inequalities on graphs - shading				
Similar shapes (area and volume)				
Enlargements – negative scale factor				
Circle theorems (including intersecting chord theorem)				
Cumulative frequency				
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/exponential				
Algebraic Fractions				
Re-arranging harder formulae				
Functions – inverse and composite				
Functions – domain and range				
Sine cosine rule				

Area of any triangle				
3D Pythagoras				
Rates of change and tangents to curves				
Differentiation (techniques and stationary points)				
Histograms				
Grade 8/9 (8 = Low A* or high A 70%, 9 = high A* 85%)				
Quadratic simultaneous equations				
Area of shapes with algebra				
Sine/cosine rule with algebra				
Differentiation – optimisation and kinematics				
Sum of n terms of an arithmetic series				
Ratio with algebra				
Transforming curves				
Completing the square				
Quadratic inequalities				
Velocity time graphs				
Equation of a tangent				
Vector proof questions				