

GCSE/IGCSE Maths Topic Checklist

Topics				
2D shapes - area and perimeter (squares, rectangles, trapezium, parallelograms and triangles)				
2D shapes - area of compound shapes				
3D shapes - surface area and volume of spheres, cones and frustrums (including with algebra) <i>(Frustrums are not in iGCSE)</i>				
3D shapes - surface area and volume of prisms and cylinders (including with algebra)				
3D Pythagoras				
Addition of integers				
Algebraic fractions				
Algebra – collecting like terms (adding and multiplying)				
Angles in parallel lines				
Angles in polygons				
Area of any triangle				
Bar charts				
Basic Probability– conditional probability with algebra				
Bearings				
Best buy questions				
BIDMAS				
Bounds				
Box plots <i>(not in iGCSE)</i>				
Calculation money problems				
Circles – area and perimeter				
Circle theorems <i>(extra topic: intersecting chord theorem is in iGCSE, but not GCSE)</i>				
Completing the square				
Congruent shapes <i>(not in iGCSE)</i>				
Conversions and units				
Coordinates				
Cumulative frequency				
Decimals – addition, subtraction, multiplication and division				
Decimals - recurring decimals to fractions				
<i>Differentiation (in iGCSE only)</i>				
Direct and inverse proportion				
Distance and velocity time graphs				
Division of integers				
Drawing graphs by plugging into tables and plotting the points				
Drawing quadratic graphs				
Enlargements – negative scale factor				
Error intervals <i>(not in iGCSE)</i>				
Estimating				
Exchange rate				
Expanding brackets (including triple brackets)				
Exponential functions and exponential growth <i>(not in iGCSE)</i>				
Factorising				
Factors and Multiples				
Forming and solving equations				
Fractions – adding, subtracting, multiplying and dividing				
Fractions of an amount				
Fractions- writing, simplifying and ordering				
Fractions, decimals and percentages (converting between)				
Frequency Polygons				
Frequency tables				
Function machines				
Functions – inverse and composite <i>(extra topic: domain and range in iGCSE, but not GCSE)</i>				
HCF and LCM				
Histograms				
Indices				
Indices – fractions and negative powers				
Inequalities – representing on a number line				
Inequalities – solving equations				
Inequalities on graphs – shading				
Inequalities - quadratics				
Iteration				
Loci and construction <i>(not in iGCSE)</i>				
Mean and median <i>(class interval containing median not in iGCSE)</i>				
Multiplication of integers				
Names of angles				

Names of Polygons				
Negative numbers				
Number Substitution				
Other graphs – cubic, reciprocal				
Other graphs – trig/exponential				
Percentage change				
Percentages - compound interest and depreciation				
Percentages- finding percentages of amounts				
Percentages – increase/decrease				
Percentages – repeated percentage change				
Percentages – reverse percentages				
Pictograms				
Pie charts				
Place value				
Plans and elevations				
Powers and roots				
Prime factor trees				
Probability basics				
Probability trees				
Probability tree diagrams – conditional probability with algebra				
Product rule for counting				
Proofs – circle theorems, sine cosine rule and quad formula (not in iGCSE)				
Proportion – recipes and ingredients				
Pythagoras				
Rates of change and tangents to curves				
Ratio – capture recapture				
Ratio – writing as a fraction and simplifying				
Ratio – writing ratios as fractions				
Ratio – writing ratios as linear functions (when given 2 ratios)				
Ratio – sharing				
Ratio – with algebra				
Re-arranging formulae (changing the subject)				
Reading scales				
Real life graphs - interpreting				
Rounding				
Scale drawings				
Scatter graphs				
Sectors - area and arc length				
Sequences generating – geometric, arithmetic, triangular, square, Fibonacci) (not in iGCSE)				
Sequences - nth term of a linear sequence (common difference)				
Sequences - nth term of a quadratic sequence (not in iGCSE)				
Sum of n terms of an arithmetic series (in iGCSE only)				
Similar shapes (lengths)				
Similar shapes (area and volume)				
Simultaneous equations - linear				
Simultaneous equations - quadratic				
Simultaneous equations graphically				
Sine cosine rule (including with algebra)				
SOHCAHTOA				
Solving linear equations				
Solving quadratics				
Speed and density				
Standard form				
Stem and leaf (not in iGCSE)				
Straight line graphs - gradient, midpoint equation etc				
Straight line graphs - parallel and perpendicular lines				
Straight line graphs – finding areas under the graph				
Subtraction of integers and decimals				
Systematic listing strategies (not in iGCSE)				
Surds				
Tangent equation				
Time				
Transformations of shapes (reflections, enlargements rotations and translations)				
Transforming curves				
Trig Values – exact (not in iGCSE)				
Two-way tables (not in iGCSE)				
Using graphs to solve equations (quadratics and cubics)				
Vectors (extra topic: modulus is in iGCSE, but not GCSE)				
Vector - proof questions				
Venn diagrams				