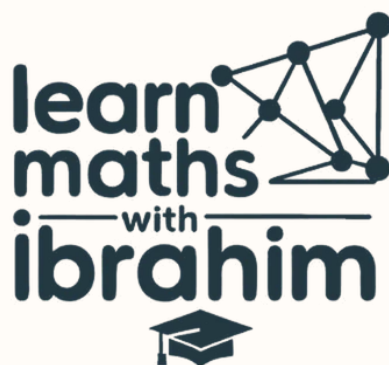




FREE REVISION CHECKLIST

Cambridge IGCSE Maths Revision Checklist

Cambridge IGCSE Mathematics (0580) · Core and Extended

NUMBER

ALGEBRA

COORDINATES

GEOMETRY

MENSURATION

TRIGONOMETRY

VECTORS

PROBABILITY

STATISTICS

EXAM BOARD	Cambridge IGCSE Mathematics
COURSE CODE	0580
TIERS	Core (grades C–G) and Extended (grades A*–E)
PAPERS	Core: Paper 1 and Paper 3 · Extended: Paper 2 and Paper 4
TOPICS	86 topics in nine units (53 Core and Extended, 33 Extended only)
FORMULAE	A list of formulas is printed in every paper, but some formulas must be learnt

THE EXAM AT A GLANCE

Everything in this checklist is in the Cambridge IGCSE Mathematics (0580) specification (the official list of topics). Core students sit Papers 1 and 3. Extended students sit Papers 2 and 4. One paper in each pair is non-calculator.

CORE • GRADES C–G

PAPER 1

Core • Non-Calculator

1h 30m • 80 marks

PAPER 3

Core • Calculator

1h 30m • 80 marks

EXTENDED • GRADES A*–E

PAPER 2

Extended • Non-Calculator

2h • 100 marks

PAPER 4

Extended • Calculator

2h • 100 marks

Each student sits two papers, each worth half of the final grade. A list of formulas is printed in every paper, but some formulas must be learnt.

THE NINE UNITS

Number 20 topics • 5 Extended only	Algebra and Graphs 22 topics • 12 Extended only	Coordinate Geometry 7 topics • 2 Extended only	Geometry 9 topics • 2 Extended only	Mensuration 5 topics • 0 Extended only
Trigonometry 6 topics • 4 Extended only	Transformations and Vectors 5 topics • 4 Extended only	Probability 4 topics • 1 Extended only	Statistics 8 topics • 3 Extended only	

HOW TO USE THIS CHECKLIST

1 Tick One Box For each topic, tick Not Yet, Nearly or Confident. Be honest!	2 Start With Not Yet Revise the Not Yet topics first, then move on to the Nearly ones.	3 Core First Core topics come first in each unit. Secure them before the Extended ones.	4 Repeat Monthly Fill it in again every month and watch the Confident column grow.
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☐ Not Yet
 ☐ Nearly
 ☐ Confident
 ☒ All Core and Extended
 ☒ Extended Extended only

Core and Extended labels follow the Cambridge IGCSE Mathematics (0580) syllabus.

Number			20 topics · 5 Extended only		
NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT
1	Types of Number Natural numbers, integers, primes, squares, cubes, factors, multiples, HCF, LCM, rational and irrational numbers	All	☐	☐	☐
2	Sets Venn diagrams and set notation, such as $n(A)$, $\in$, A' , $A \cap B$ and $A \cup B$	All	☐	☐	☐
3	Powers and Roots Squares, square roots, cubes and cube roots	All	☐	☐	☐
4	Fractions, Decimals and Percentages Using and converting between equivalent fractions, decimals and percentages	All	☐	☐	☐
5	Ordering Ordering quantities and using $=$, $\neq$, $>$, $<$, $\geq$ and $\leq$	All	☐	☐	☐
6	The Four Operations Calculating with integers, fractions and decimals, including negatives and order of operations	All	☐	☐	☐
7	Indices Index notation and the laws of indices, including zero and negative indices	All	☐	☐	☐
8	Standard Form Writing and calculating with numbers in standard form	All	☐	☐	☐
9	Estimation Rounding to decimal places and significant figures, and estimating answers	All	☐	☐	☐
10	Limits of Accuracy Upper and lower bounds of rounded values	All	☐	☐	☐
11	Ratio and Proportion Simplifying ratios, sharing in a ratio and direct proportion	All	☐	☐	☐
12	Rates Average speed and other rates, including converting units	All	☐	☐	☐
13	Percentages Percentages of amounts, percentage increase and decrease, simple and compound interest	All	☐	☐	☐
14	Using a Calculator Using a calculator efficiently and checking answers	All	☐	☐	☐
15	Time and Money Time calculations, timetables and currency conversion	All	☐	☐	☐
16	Fractional Indices Evaluating and simplifying expressions with fractional indices	Extended	☐	☐	☐
17	Bounds in Calculations Upper and lower bounds of answers to calculations	Extended	☐	☐	☐
18	Reverse Percentages Finding the original amount after a percentage change	Extended	☐	☐	☐

NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT
19	Exponential Growth and Decay Problems involving repeated percentage change	Extended	☐	☐	☐
20	Surds Simplifying surds and rationalising the denominator	Extended	☐	☐	☐

Algebra and Graphs

22 topics · 12 Extended only

NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT
21	Introduction to Algebra Using letters for numbers and substituting into expressions and formulae	All	☐	☐	☐
22	Expanding and Factorising Simplifying, expanding brackets and taking out common factors	All	☐	☐	☐
23	Indices in Algebra Using the laws of indices with algebraic terms	All	☐	☐	☐
24	Linear Equations and Formulae Solving linear equations and changing the subject of simple formulae	All	☐	☐	☐
25	Simultaneous Linear Equations Solving a pair of linear equations	All	☐	☐	☐
26	Linear Inequalities Solving inequalities and showing them on a number line	All	☐	☐	☐
27	Sequences Continuing sequences, spotting patterns and finding the nth term	All	☐	☐	☐
28	Graphs in Practical Situations Travel graphs, conversion graphs and other real-life graphs	All	☐	☐	☐
29	Graphs of Functions Drawing tables of values and graphs of linear, quadratic and reciprocal functions	All	☐	☐	☐
30	Sketching Curves Recognising and sketching the shapes of common graphs	All	☐	☐	☐
31	Harder Expanding and Factorising Expanding products of brackets and factorising quadratics, including the difference of two squares	Extended	☐	☐	☐
32	Algebraic Fractions Simplifying, adding, subtracting, multiplying and dividing algebraic fractions	Extended	☐	☐	☐
33	Quadratic Equations Solving by factorising, the quadratic formula and completing the square	Extended	☐	☐	☐
34	Harder Simultaneous Equations Solving a linear and a quadratic equation together	Extended	☐	☐	☐
35	Rearranging Harder Formulae Changing the subject when it appears more than once or inside a power or root	Extended	☐	☐	☐

NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT
36	Inequalities and Regions Quadratic inequalities and showing regions on a graph	Extended	☐	☐	☐
37	Harder Sequences Finding the nth term of quadratic, cubic and exponential sequences	Extended	☐	☐	☐
38	Direct and Inverse Proportion Forming and using equations for direct and inverse proportion	Extended	☐	☐	☐
39	Speed-Time Graphs Acceleration, deceleration and distance as the area under the graph	Extended	☐	☐	☐
40	Harder Graphs and Tangents Cubic and exponential graphs, solving equations graphically and estimating gradients with tangents	Extended	☐	☐	☐
41	Functions Function notation, composite functions and inverse functions	Extended	☐	☐	☐
42	Differentiation Differentiating ax^n , finding gradients and turning points, and deciding if they are maximum or minimum points	Extended	☐	☐	☐

Coordinate Geometry

7 topics · 2 Extended only

NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT
43	Coordinates Plotting and reading points in all four quadrants	All	☐	☐	☐
44	Drawing Linear Graphs Drawing straight-line graphs from their equations	All	☐	☐	☐
45	Gradient of Linear Graphs Finding the gradient of a straight line	All	☐	☐	☐
46	Equations of Straight Lines Using and finding equations in the form $y = mx + c$	All	☐	☐	☐
47	Parallel Lines Finding the equation of a line parallel to another	All	☐	☐	☐
48	Length and Midpoint Finding the length and midpoint of a line segment	Extended	☐	☐	☐
49	Perpendicular Lines Finding the gradient and equation of a perpendicular line	Extended	☐	☐	☐

Geometry						9 topics · 2 Extended only			
NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT				
50	Geometrical Terms Correct names for angles, lines, triangles, quadrilaterals, polygons, circles and solids	All	☐	☐	☐				
51	Geometrical Constructions Constructing triangles, bisectors and nets with a ruler and compasses	All	☐	☐	☐				
52	Scale Drawings and Bearings Using scales and measuring and calculating bearings	All	☐	☐	☐				
53	Similarity Calculating lengths in similar shapes	All	☐	☐	☐				
54	Symmetry Line and rotational symmetry of 2D shapes	All	☐	☐	☐				
55	Angles Angle facts, angles in parallel lines and angles in polygons	All	☐	☐	☐				
56	Circle Theorems I The first set of circle theorems, such as the angle in a semicircle and tangent properties	All	☐	☐	☐				
57	Similar Areas and Volumes Using the relationship between lengths, areas and volumes of similar shapes	Extended	☐	☐	☐				
58	Circle Theorems II The full set of circle theorems, including cyclic quadrilaterals and the alternate segment theorem	Extended	☐	☐	☐				
Mensuration						5 topics · 0 Extended only			
NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT				
59	Units of Measure Converting units of length, area, volume, mass and capacity	All	☐	☐	☐				
60	Area and Perimeter Rectangles, triangles, parallelograms, trapezia and compound shapes	All	☐	☐	☐				
61	Circles, Arcs and Sectors Circumference and area of circles, arc lengths and sector areas	All	☐	☐	☐				
62	Surface Area and Volume Cuboids, prisms, cylinders, spheres, pyramids and cones	All	☐	☐	☐				
63	Compound Shapes and Parts of Shapes Areas and volumes of shapes made from or cut from simpler ones	All	☐	☐	☐				

Trigonometry					6 topics · 4 Extended only			
NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT			
64	Pythagoras' Theorem Finding a missing side in a right-angled triangle	All	☐	☐	☐			
65	Right-Angled Trigonometry Using sine, cosine and tangent, including angles of elevation and depression	All	☐	☐	☐			
66	Exact Trigonometric Values Exact values of sin, cos and tan for 0°, 30°, 45°, 60° and 90° where they exist	Extended	☐	☐	☐			
67	Trigonometric Functions Graphs of sine, cosine and tangent and solving simple trigonometric equations	Extended	☐	☐	☐			
68	Non-Right-Angled Triangles The sine rule, the cosine rule and area = $\frac{1}{2}ab \sin C$	Extended	☐	☐	☐			
69	3D Pythagoras and Trigonometry Lengths and angles in 3D shapes	Extended	☐	☐	☐			

Transformations and Vectors					5 topics · 4 Extended only			
NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT			
70	Transformations Reflection, rotation, translation and enlargement	All	☐	☐	☐			
71	Harder Transformations Enlargement with fractional and negative scale factors, and combined transformations	Extended	☐	☐	☐			
72	Vectors in Two Dimensions Column vectors, adding, subtracting and multiplying by a scalar	Extended	☐	☐	☐			
73	Magnitude of a Vector Finding the length of a vector	Extended	☐	☐	☐			
74	Vector Geometry Using vectors to find paths and prove geometric results	Extended	☐	☐	☐			

Probability					4 topics · 1 Extended only			
NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT			
75	Introduction to Probability The probability scale and the probability of an event not happening	All	☐	☐	☐			
76	Relative and Expected Frequencies Estimating probabilities from experiments and predicting outcomes	All	☐	☐	☐			
77	Combined Events Sample space diagrams, Venn diagrams and tree diagrams	All	☐	☐	☐			

NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT
78	Conditional Probability Probabilities that depend on a previous outcome	Extended	☐	☐	☐

Statistics		8 topics · 3 Extended only			
NO.	TOPIC AND WHAT IT INCLUDES	TIER	NOT YET	NEARLY	CONFIDENT
79	Classifying Data Types of data and collecting data	All	☐	☐	☐
80	Interpreting Data Reading and drawing conclusions from tables and charts	All	☐	☐	☐
81	Averages and Range Mean, median, mode and range, including from frequency tables	All	☐	☐	☐
82	Charts and Diagrams Bar charts, pie charts, pictograms and stem-and-leaf diagrams	All	☐	☐	☐
83	Scatter Diagrams Correlation and lines of best fit	All	☐	☐	☐
84	Averages and Measures of Spread Estimated mean from grouped data, quartiles and the interquartile range	Extended	☐	☐	☐
85	Cumulative Frequency Drawing and using cumulative frequency diagrams	Extended	☐	☐	☐
86	Histograms Drawing and interpreting histograms with unequal class widths	Extended	☐	☐	☐



TRACK YOUR PROGRESS

MY PROGRESS SUMMARY

Count your ticks for each unit and write them in. Fill this in again every month to see how far you've come.

UNIT	TOPICS	NOT YET	NEARLY	CONFIDENT
● Number	20			
● Algebra and Graphs	22			
● Coordinate Geometry	7			
● Geometry	9			
● Mensuration	5			
● Trigonometry	6			
● Transformations and Vectors	5			
● Probability	4			
● Statistics	8			
Total	86			

REVISION TIPS THAT WORK

Little and Often

20 to 30 minutes of maths on most days beats one long session at the weekend.

Practise, Don't Just Read

Do exam-style questions. Reading notes feels useful, but solving questions is what builds marks.

Learn From Mistakes

Keep a list of questions you got wrong and try them again a week later.

Practise Without a Calculator

One of your two papers is non-calculator, so keep your written methods sharp.

Want a Plan Built Around This Checklist?

Book a free 90-minute lesson. I'll find exactly where your child is and write a personal plan for every topic they need.

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