

GCSE Maths Topics Overview

Topics	DFM Key Skills	%
1. Number		
Number problems	K31-35, K39, K476	
Estimating	K62-63, K223-225	
HCF and LCM	K59-61, K215-216, K218-219, K221	
Calculating with powers	K432-343, K439	
Zero, negative and fractional indices	K436-437, K689-692, K438	
Standard form	K446-452, K445	
Surds	K673, K685	
2. Algebra		
Algebraic Indices	K136-138, K140, K149, K151	
Expanding and factorising	K153, K155, K351-353	
Equations	K147, K370, K367, K369	
Formulae	K359-K363	
Linear sequences	K158-159, K163-164, K160	
Non-linear sequences	K406-407, K162-161	
Further expanding and factorising	K381-385	
3. Interpreting and representing data		
Statistical diagrams 1	K84, K261	
Time series		
Scatter graphs	K258-260	
Line of best fit	K260	
Averages and range	K237-239, K261-265, K249-256	
Statistical diagrams 2	K83, K83, K266-K268	
4. Fractions, ratio and percentages		
Fractions	K46-47, K170-175, K178-180	
Ratio and proportion	K196-198, K202-205, K230-231, K234-235	
Percentages	K207-211, K213-214, K424-426, K234-235	
Fractions, decimals and percentages	K51-57, K469-471	
5. Angles and trigonometry		
Angle properties of triangles and quadrilaterals	K107, K301-302, K309, K304-307	
Interior angles of a polygon	K477-481	
Exterior angles of a polygon	K477-481	
Pythagoras' theorem	K504-508	
Trigonometry	K482-486, K488, K469-471	
6. Graphs		
Linear graphs	K122-125, K320-321, K388-403	
Graphing rates of change	K326	
Real-life graphs	K547-548	
Line segments	K546	
Quadratic graphs	K414-415	
Cubic and reciprocal graphs	K416-417	
Interpreting graphs	K608	
7. Area and volume		
Perimeter and area	K110, K114, K119, K296, K299	
Units of accuracy	K132-135, K453-464	
Prisms	K311-315	
Circles	K290-K294, K287-K289, K501, K498, K118	
Cylinders and spheres	K316-317, K657-658, K318-319	
Pyramids and cones	K662-668	
8. Transformations and constructions		
3D solids	K96	
Reflections and rotations	K489, K491-492, K273-284	
Enlargement	K285, K493, K494, K286, K495-496	
Translations	K280, K281	
Bearings and scale drawings	K324-325, K543-544	
Constructions and loci	K545, K533-535	
9. Equations and inequalities		
Solving quadratic equations	K384, K615, K618, K619	
Completing the square	K620	
Simultaneous equations	K374, K375-380, K570-571	
Linear inequalities	K341-347	

10. Probability		
Combined events	K73-K75	
Mutually exclusive events	K76-K78	
Experimental probability	K269-K270	
Independent events and tree diagrams	K562-K565	
Conditional probability	K566-K567	
Venn diagrams and set notation	K568, K468	
11. Multiplicative reasoning		
Growth and decay	K517-519	
Compound measures	K512-514	
Ratio and proportion	K695, K230-233	
12. Similarity and congruence		
Congruence	E248	
Geometric proof		
Similarity in 2D and 3D shapes	K520-528	
13. Further trigonometry		
Accuracy	K453-K458	
Graphs of sine and cosine	K488, K633-K637	
Tangent function	K483-K484	
Calculating areas and the sine rule	K639, K633-K635	
Cosine rule and bearings	K636-K637	
3D trigonometry and pythagoras	K510-511, K641, K642	
Transformations of trig graphs	K585-588	
14. Further Statistics		
Sampling	E101, K271	
Cumulative Frequency	K557-K561	
Box plots	K555-K556	
Drawing histograms	K623-K624	
Interpreting histograms	K625-K626	
Comparing and describing populations		
15. Equations and graphs		
Solving simultaneous equations graphically	K374	
Representing inequalities graphically	K602-603	
Graphs of quadratic functions	K582-583, K421	
Solving quadratic equations graphically	K609-610	
Iteration	K589	
Graphs of cubic functions	K416	
16. Circle Theorems		
Radii and chords	K417-418	
Tangents	K579	
Angles in circles	K643-648	
Applying circle theorems	K643-648	
17. Further algebra		
Rearranging formulae	K572-575	
Simplifying algebraic fractions	K412-413	
Algebraic fraction calculations	K408-411, K605-606, K614	
Further surds	K685-687	
Functions	K590-592, K595	
Proof	K597-601	
18. Vectors and geometric proof		
Vector notation	K650	
Vector arithmetic	K649	
Parallel and colinear points	K651	
Solving geometric problems	K652-654	
19. Proportion and graphs		
Direct proportion	K472	
Inverse proportion	K474	
Exponential functions	K607, K613, K753	
Non-linear graphs	K546	
Translating graphs of functions	K585-586	
Reflecting and stretching graphs of functions	K587-588	

Additional Resources
Maths Genie
Physicsandmathstutor.com
Corbett Maths
Here you can find past papers, worksheets filtered by topic as well as written and video solutions

Onmaths
Here you can complete past paper questions online and receive instant feedback. You can see what grade you are working at as you work through the paper.

Youtube - Corbett Maths
Here you can find lots of videos on GCSE topics. Complete the questions as you watch the video.

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