

Checklist (GCSE Higher)

Below is a list of all of the available topics and links that are relevant to GCSE Higher.

(These are in addition to consolidating subject content from Key Stage 3 and GCSE Foundation).

YOU MUST LOG IN TO www.teachusmaths.com FIRST TO BE ABLE TO ACCESS THE 'LESSON' AND 'WORKSHEET' LINKS

Each topic is also colour coded...

Blue for approx. GCSE grades 4&5

Purple for approx. GCSE grades 6-9

NUMBER

INTEGERS				☆☆☆
N 1.6 Prime Numbers & Prime Factor Decomposition	Lesson	Worksheet	Video	
N 1.7 Factors & Highest Common Factor (HCF)	Lesson	Worksheet	Video	
N 1.8 Multiples & Lowest Common Multiple (LCM)	Lesson	Worksheet	Video	
FRACTIONS				
N 4.3 Ordering Fractions	Lesson	Worksheet	Video	
N 4.4 Adding & Subtracting Fractions	Lesson	Worksheet	Video	
FRACTIONS, DECIMALS & PERCENTAGES				
N 5.3 Recurring Decimals	Lesson	Worksheet	Video	
PERCENTAGES				
N 6.5 Percentage Change	Lesson	Worksheet	Video	
N 6.6 Reverse Percentages	Lesson	Worksheet	Video	
N 6.7 Compound Interest	Lesson	Worksheet	Video	
ROUNDING				
N 7.4 Truncating	Lesson	Worksheet	Video	
N 7.5 Estimation	Lesson	Worksheet	Video	
N 7.6 Error Intervals	Lesson	Worksheet	Video	
N 7.7 Calculating with Upper & Lower Bounds	Lesson	Worksheet	Video	

INDICES				
N 8.2 Laws of Indices	Lesson	Worksheet	Video	
N 8.3 Fractional Indices	Lesson	Worksheet	Video	
STANDARD FORM				
N 9.1 Standard Form	Lesson	Worksheet	Video	
N 9.2 Calculating with Standard Form	Lesson	Worksheet	Video	
SURDS				
N 10.1 Surds	Lesson	Worksheet	Video	
N 10.2 Rationalising the Denominator	Lesson	Worksheet	Video	
CALCULATIONS				
N 11.1 Using a Calculator	Lesson	Worksheet	Video	

RATIO, PROPORTION & RATES OF CHANGE

RATIO				☆☆☆
R 1.3 Sharing in a Ratio	Lesson	Worksheet	Video	
R 1.4 Ratio Problems	Lesson	Worksheet	Video	
PROPORTION				
R 2.2 Direct & Inverse Proportion	Lesson	Worksheet	Video	
R 2.3 Direct Proportion (Algebra)	Lesson	Worksheet	Video	
R 2.4 Inverse Proportion (Algebra)	Lesson	Worksheet	Video	
COMPOUND MEASURES				
R 3.2 Density	Lesson	Worksheet	Video	
R 3.3 Pressure	Lesson	Worksheet	Video	
REAL-LIFE GRAPHS				
R 4.2 Other Real-Life Graphs	Lesson	Worksheet	Video	
R 4.4 Speed-Time Graphs (Straight Lines)	Lesson	Worksheet	Video	
R 4.5 Speed-Time Graphs (Curves)	Lesson	Worksheet	Video	

ALGEBRA

CO-ORDINATES				☆☆☆
A 1.2 Midpoint of a Line	Lesson	Worksheet	Video	

A 1.3 3D Co-ordinates	Lesson	Worksheet	Video	
LINEAR GRAPHS				
A 2.3 Equations of Linear Graphs ($y = mx + c$)	Lesson	Worksheet	Video	
A 2.4 Using $y = mx + c$ to Draw Linear Graphs	Lesson	Worksheet	Video	
A 2.5 Using $y = mx + c$ to Solve Problems	Lesson	Worksheet	Video	
A 2.6 Using Gradients and Co-ordinates to find $y = mx + c$	Lesson	Worksheet	Video	
A 2.7 Parallel & Perpendicular Lines	Lesson	Worksheet	Video	
ALGEBRA				
A 3.6 Factorising into Single Brackets	Lesson	Worksheet	Video	
A 3.7 Laws of Indices (Algebra)	Lesson	Worksheet	Video	
A 3.11 Solving Linear Equations (with the unknown on both sides)	Lesson	Worksheet	Video	
A 3.12 Changing the Subject	Lesson	Worksheet	Video	
A 3.13 Changing the Subject (Advanced)	Lesson	Worksheet	Video	
QUADRATICS				
A 4.1 Expanding Double Brackets	Lesson	Worksheet	Video	
A 4.2 Factorising Quadratics	Lesson	Worksheet	Video	
A 4.3 Factorising Quadratics (Advanced)	Lesson	Worksheet	Video	
A 4.4 Completing the Square	Lesson	Worksheet	Video	
A 4.5 Plotting Quadratic Graphs	Lesson	Worksheet	Video	
A 4.6 Solving Quadratics - Graphically	Lesson	Worksheet	Video	
A 4.7 Solving Quadratics - Graphically (Advanced)	Lesson	Worksheet	Video	
A 4.8 Solving Quadratics - Factorising	Lesson	Worksheet	Video	
A 4.9 Solving Quadratics - Factorising (Advanced)	Lesson	Worksheet	Video	
A 4.10 Solving Quadratics - Quadratic Formula	Lesson	Worksheet	Video	
A 4.11 Solving Quadratics - Completing the Square	Lesson	Worksheet	Video	
A 4.12 Solving Quadratics - All Methods	Lesson	Worksheet	Video	
A 4.13 Sketching Quadratic Graphs	Lesson	Worksheet	Video	
CUBICS				
A 5.1 Expanding Triple Brackets	Lesson	Worksheet	Video	
A 5.2 Cubic Graphs	Lesson	Worksheet	Video	
OTHER GRAPHS				
A 6.1 Reciprocal Graphs	Lesson	Worksheet	Video	
A 6.2 Exponential Graphs	Lesson	Worksheet	Video	
A 6.3 Equations of Tangents to Circles	Lesson	Worksheet	Video	
A 6.4 Trigonometric Graphs	Lesson	Worksheet	Video	
A 6.5 Transformations of Graphs	Lesson	Worksheet	Video	

INEQUALITIES				
A 7.1 Inequalities on a Number Line	Lesson	Worksheet	Video	
A 7.2 Solving Linear Inequalities	Lesson	Worksheet	Video	
A 7.3 Solving Linear Inequalities Graphically	Lesson	Worksheet	Video	
A 7.4 Solving Quadratic Inequalities	Lesson	Worksheet	Video	
ITERATION				
A 8.1 Trial & Improvement	Lesson	Worksheet	Video	
A 8.2 Iteration	Lesson	Worksheet	Video	
SIMULTANEOUS EQUATIONS				
A 9.1 Simultaneous Equations - Linear	Lesson	Worksheet	Video	
A 9.2 Simultaneous Equations – Non-Linear	Lesson	Worksheet	Video	
SEQUENCES				
A 10.1 Linear Sequences	Lesson	Worksheet	Video	
A 10.2 Quadratic Sequences	Lesson	Worksheet	Video	
A 10.3 Geometric & Fibonacci Sequences	Lesson	Worksheet	Video	
ALGEBRAIC FRACTIONS				
A 11.1 Algebraic Fractions - Simplify	Lesson	Worksheet	Video	
A 11.2 Algebraic Fractions - Add/Subtract	Lesson	Worksheet	Video	
A 11.3 Algebraic Fractions - Multiply/Divide	Lesson	Worksheet	Video	
FUNCTIONS				
A 12.1 Functions	Lesson	Worksheet	Video	
PROOF				
A 13.1 Algebraic Proof	Lesson	Worksheet	Video	

GEOMETRY

CIRCLES				☆☆☆
G 3.2 Arc Length	Lesson	Worksheet	Video	
G 3.4 Area of Sectors	Lesson	Worksheet	Video	
SURFACE AREA & VOLUME				
G 4.1 Surface Area - Prisms & Cylinders	Lesson	Worksheet	Video	
G 4.2 Surface Area – Spheres, Pyramids & Cones	Lesson	Worksheet	Video	
G 4.4 Volume – Spheres, Pyramids & Cones	Lesson	Worksheet	Video	
UNITS				
G 5.3 Converting Units - Area/Volume	Lesson	Worksheet	Video	

ANGLES				
G 6.6 Bearings	Lesson	Worksheet	Video	
CONSTRUCTIONS				
G 7.1 Perpendicular Bisector & Angle Bisector	Lesson	Worksheet	Video	
G 7.2 Loci	Lesson	Worksheet	Video	
CONGRUENCE & SIMILARITY				
G 8.1 Congruence	Lesson	Worksheet	Video	
G 8.2 Similarity	Lesson	Worksheet	Video	
TRANSFORMATIONS				
G 9.4 Enlargement	Lesson	Worksheet	Video	
G 9.5 Enlargement (Negative Scale Factors)	Lesson	Worksheet	Video	
PYTHAGORAS & TRIGONOMETRY				
G 10.1 Pythagoras' Theorem	Lesson	Worksheet	Video	
G 10.2 Trigonometry – Introduction	Lesson	Worksheet	Video	
G 10.3 Trigonometry – Further	Lesson	Worksheet	Video	
G 10.4 Trigonometry - Exact Values	Lesson	Worksheet	Video	
G 10.5 Sine Rule	Lesson	Worksheet	Video	
G 10.6 Cosine Rule	Lesson	Worksheet	Video	
G 10.7 Area of a Triangle	Lesson	Worksheet	Video	
VECTORS				
G 11.1 Vectors	Lesson	Worksheet	Video	
CIRCLE THEOREMS				
G 12.1 Circle Theorems	Lesson	Worksheet	Video	
G 12.2 Further Circle Theorems	Lesson	Worksheet	Video	

STATISTICS

DATA COLLECTION				☆☆☆
S 1.2 Sampling & Capture, Recapture	Lesson	Worksheet	Video	
AVERAGES				
S 2.2 Averages from a Table	Lesson	Worksheet	Video	
CHARTS & GRAPHS				
S 3.6 Scatter Graphs	Lesson	Worksheet	Video	
S 3.7 Cumulative Frequency Diagrams	Lesson	Worksheet	Video	
S 3.8 Box Plots	Lesson	Worksheet	Video	

S 3.9 Histograms	Lesson	Worksheet	Video	
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PROBABILITY

PROBABILITY				☆☆☆
P 1.2 Relative Frequency	Lesson	Worksheet	Video	
COMBINED PROBABILITY				
P 2.1 Listing Outcomes, Sample Spaces & Frequency Trees	Lesson	Worksheet	Video	
P 2.2 Tree Diagrams	Lesson	Worksheet	Video	
P 2.3 Venn Diagrams	Lesson	Worksheet	Video	
P 2.4 Product Rule for Counting	Lesson	Worksheet	Video	