



Maths higher tier expected topics

As a department, we have analysed the non-calculator paper and put together this list of topics that have not yet been assessed. It does not mean they are guaranteed to come up but there is a good chance that they will.

Number

- Ordering fractions/decimals/percentages
- Compound measures (speed=distance÷time, density=mass÷volume)
- Compound interest
- Percentages (including reverse percentages)
- Standard form using a calculator
- Upper/lower bounds
- Calculator sums
- Imperial-metric conversions
- Ratio and proportion
- Value for money
- Highest common factor and lowest common multiple
- Recurring decimals to fractions
- Surds and rationalising the denominator
- Product of prime factors

Shape

- Trigonometry (both right angled and non-right angled triangles)
- Pythagoras' theorem
- 3D coordinates
- Volumes/surface area of shapes (cones, sphere, pyramid)
- Similar shapes and proof of congruence
- Loci
- Translations and enlargement
- Circumference of circles
- Angle reasoning including parallel lines

Algebra

- Trial and improvement
- Plotting graphs (linear/quadratic/cubic/reciprocal)
- Straight line graphs and equations (parallel and perpendicular gradients)
- Solving quadratic equations (factorising/quadratic formula/completing the square)
- Simultaneous equations
- Rearranging a formula
- Graphing inequalities
- Expanding double brackets
- Substitution
- Nth terms of sequences
- Transforming graphs (function notation)
- Simplifying algebraic expressions

Data Handling

- Histograms
- Cumulative frequency
- Stem and leaf diagrams
- Frequency Polygons
- Averages and range (tabulated data, grouped data)
- Time series (moving average)

Please be aware that some of these topics you may not have been taught due to your target grades.
Please liaise with your teacher if you are unsure what to revise.