

Revision checklist

Grade 7

Number

- Surds and rationalising denominators in multi-step problems
- Exact calculations involving surds and π
- Fractional and negative indices
- Bounds in compound calculations
- Error intervals and maximum/minimum possible values

Algebra

- Completing the square and interpreting quadratic graphs
- Quadratic formula in complex contexts
- Simultaneous linear/quadratic equations
- Algebraic fractions with multiple operations
- Composite and inverse functions
- Algebraic proof and identities involving several steps
- Iteration to solve equations approximately
- Solving inequalities and representing regions graphically
- Intersections of graphs and approximate solutions
- Gradients and areas under non-linear graphs

Ratio and proportion

- Complex direct and inverse proportion
- Algebraic ratio problems
- Growth and decay with compound interest
- Multi-step similarity problems involving lengths, areas and volumes
- Average and instantaneous rates of change

Geometry

- Circle theorem proofs
- Complex bearings and scale diagrams
- 3D trigonometry
- Sine rule and cosine rule in unfamiliar contexts
- Vectors: proving parallel lines and geometric relationships
- Transformations and combinations of transformations
- Complex area, surface area and volume problems

Probability

- Conditional probability in unfamiliar contexts
- Multi-stage probability tree diagrams
- Venn diagrams with algebraic probabilities

Statistics

- Histograms and cumulative frequency in multi-step problems
- Comparing data sets using several statistical measures
- Critical interpretation of sampling, correlation and extrapolation

Disclaimer: The grade groupings (Grades 1–3, 4–6 and 7–9) are intended as a general guide only. They are approximate and are not fixed boundaries, as the difficulty of a topic can vary depending on the question and the skills required. Some topics may overlap between grade groups, and students may need to revisit earlier skills before progressing to more challenging material. The actual GCSE grade achieved will depend on overall performance across the full exam, not on individual topics alone