



13+ Syllabus Summary for Mathematics

The entrance paper examination consists of a 1½ hour written paper. Candidates should be familiar with most of the skills and knowledge of Key Stage 3 Mathematics.

Topics covered mainly come from Levels 1 to 6, with some elements of Level 7. However, the emphasis is more on testing the ability to think rather than just knowledge, i.e. there will be several questions on 'easy' topics which require a willingness to think and persevere with a problem.

Basic numeracy is assumed, i.e. the four operations with natural numbers, negative numbers, decimals and fractions, plus a knowledge of prime numbers, powers and roots. Calculators are allowed throughout the examination.

Some specific topics which may be tested are:

1. Linear sequences and other simple sequences, e.g. square numbers
2. Rounding to significant figures / decimal places
3. Calculations involving percentages
4. Ratios including sharing in a ratio
5. Calculations involving speeds
6. Basic algebra, including multiplying out brackets and extracting common factors
7. Solving linear equations, including simple cases with fractions
8. Line and rotational symmetry
9. Transformations: reflections, translations, rotations and enlargements
10. Areas and perimeters of triangles, quadrilaterals and circles
11. Volumes of prisms, including cylinders
12. Pythagoras's Theorem
13. Plotting co-ordinates and simple linear graphs from a table
14. Angles / geometry, including polygons and parallel lines.
15. Probability
16. Mean, mode, median and range of a set of data.
17. Pie Charts