

Mathematics Entrance Exam Syllabus for Pre-Test 13+ Entry to City of London School

There will be one paper, lasting 1 hour. Candidates can write in either pencil, blue or black ink. They will need a ruler. Calculators are not allowed.

The exam will be based on the topics below

Number

Multiplying or dividing by any 2-digit number. Adding, subtracting, multiplying and dividing decimals with up to 2 decimal places. Multiplying or dividing whole numbers, or decimals, by 10, 100 or 1000. Using negative numbers. Reducing fractions to their simplest form by cancelling common factors. Using ratio or direct proportion in simple problems. Calculating fractional or percentage parts of quantities. Understanding index notation such as 5^2 and 6^3 . Understanding and using words or phrases such as 'prime', 'square root', 'cube root', 'factor', 'multiple', including expressing a number as a product of primes. Understanding and using brackets appropriately, including knowing the order in which arithmetic operations should be carried out (e.g. $1 + 2 \times 3 = 7$).

Shape, space and measures

Time: 12 and 24 hour clock. Money. Interpreting scale drawings, including maps. Using language associated with angles (acute, obtuse, reflex). Angles at a point total 360° , angles on a straight line total 180° , angles in a triangle total 180° . Find the perimeter of rectilinear shapes. Calculating the areas of rectangles and right-angled triangles; and the volumes of cuboids. Reflection and rotation symmetry; know the terms 'mirror line' and 'order of rotational symmetry'.