

## City of London School - 11+ Mathematics Checklist

Good sources for revision for problem solving questions are our specimen examination paper, UKMT Primary Maths Challenge papers (which can be found online) and the Bond series of books (particularly 11+).

Any of the topics below can be tested and also candidates' problem-solving skills.

### Number

- Whole number arithmetic
- Decimal arithmetic including dividing by decimals
- Negative number arithmetic
- Equivalent fractions
- Ratio or direct proportion
- Fraction and percentage of a quantity
- Index notation such as  $5^2$  and  $6^3$
- Types of number: primes, squares, cubes, cube roots, square roots, factors and multiples
- Order of operations
- Sequences, finding the next term

### Shape, space and measures

- Names of simple polygons, e.g. heptagon
- Names of simple solids: cube, cuboid, sphere, cylinder
- Units: time (12 and 24 hour clock), money, compass directions
- Interpreting scale drawings, including maps
- Angles (acute, obtuse, reflex); angles at a point total  $360^\circ$ ; angles on a straight line total  $180^\circ$ ; angles in a triangle total  $180^\circ$
- Converting units, e.g. cm, m, km
- Perimeter of simple shapes involving rectangles.
- Calculating the areas of rectangles and right-angled triangles
- Volumes of cuboids and simple nets
- Reflection and rotation symmetry

### Handling data

- Charts: tally tables, bar charts, pictograms, frequency diagrams, line graphs
- Averages: mean, median and mode from a list