## Topics for Mathematics - Supply LSE Exam

- Number Work: Fractions (+, -, x, $\div$ ), Decimals, Prime Factors
- Indices: Rules of indices
- Sequences: Linear Sequence and finding the nth term
- Areas: Triangle, Parallelogram, circle, rectangle, square, rhombus, trapezium, compound shapes
- Volumes: Cube, Cuboid, Shapes with Uniform Cross-Section
- Ratios
- Percentages
- Statistics: Finding the mean, median, mode, range
- Statistics: Drawing bar charts, pie charts, simple histograms
- Trigonometry: Finding sides and angles using sine, cosine and tangent
- Pythagoras Theorem
- Simple bearings
- Algebra: Expand and simplify
- Algebra: Solving linear equations
- Algebra: Simultaneous Equations (Linear)
- Algebra: Substitution
- Algebra: Changing subject of the formula
- Algebra: Factorisation - Common Factor
- Functions: Finding $f(a$ number)
- Functions: Finding $x$ when $f(x)$ is given
- Straight line graphs: Completing the table, plotting, finding the gradient, finding the $y$ intercept
- Quadratic Graphs: Completing the table, plotting quadratic graphs
- Angles: straight line, angles at a point, angles in triangle, angles in quadrilateral, vertically opposite angles, corresponding angles, alternate angles, interior angles
- Angles in circles: angles in the same segment, angle at centre is twice angle at circumference, angles in a semi-circle, opposite angles of cyclic quad are supplementary, exterior angle of cyclic quad is equal to interior opposite
- Polygons: Finding interior and exterior angles of regular and irregular polygons
- Similar Triangles: Proving similarity and finding missing sides of similar triangles
- Congruent triangles: Proving congruency
- Probability: Find the probability of an event, possibility spaces
- Constructions: Triangle, angle of $60^{\circ}$, angle of $90^{\circ}$, angle bisector, perpendicular bisector.
- Transformations: Drawing and describing rotations, reflection, translations and enlargements.


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The exam paper will comprise one section with 16 to 20 graded questions to be answered in 1 hour 30 minutes. The questions may have different mark allocations which will be stated for each question on the exam paper. The total mark of the paper amounts to 100 marks. Candidates are allowed to use mathematical instruments and scientific calculators. Programmable calculators are not allowed.

