



**Spojená škola, Pankúchova 6, Bratislava**  
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## REQUIREMENTS FOR ENTRANCE EXAMINATIONS MATHEMATICS – 4. MYP

### 1. Numbers

- a) operations with numbers (order of operations, absolute value of a number, operations with fractions, decimals, negative number, percentage, rounding numbers to decimal places and significant figure)
- b) simple interest (calculate interest given principals, rate, time period)
- c) exponent and radicals (index notation including as product of primes, square and cube roots, rules for square roots)
- d) number properties (divisibility of numbers by 2, 3, 4, 5, 6, 9, 10, 11; find HCF; LCM of 2 or 3 numbers using their prime factor composition)
- e) ratios (2 and 3-part ratios, proportions)
- f) number sequences (complete the sequence, predict the next term, find rule given a sequence)

### 2. Algebra

- a) expressions (evaluate expressions, simplify algebraic products, basic algebraic fractions, distributive law, substitute into formula)
- b) linear function (plot graph using table of values)
- c) equations (solve simple linear equations, simple quadratic equation  $x^2 = k$ )

### 3. Geometry

- a) angles (vertically opposite angles, corresponding, alternate, co-interior angles, angles and exterior angles of triangle, isosceles triangle properties, angles of a quadrilateral, special quadrilaterals)
- b) measurement, area, volume (find perimeter of geometrical shapes; find area of parallelogram, trapezium, circle; find surface area of simple solids, find volume of prism, cylinder, sphere, cone and pyramid; conversion of length units, conversion of area units, conversion of volume and capacity units)
- c) transformations of figures – reflection
- d) congruent triangles, similar triangles

### 4. Data

- a) sets (elements, subset, null set, complement, intersection and union, Venn diagrams)
- b) statistics (interpret tables and graphs, find mean of sample)
- c) probability (calculate simple-stage probability)