



Spojená škola, Pankúchova 6, Bratislava

Organizačné zložky: Gymnázium, Pankúchova 6, Bratislava

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REQUIREMENTS FOR ENTRANCE EXAMINATIONS MATHEMATICS – 3. MYP

1. Numbers

- 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)
- simple interest (calculate interest given principals, rate, time period)
- exponent and radicals (index notation including as product of primes, square and cube roots, rules for square roots)
- 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)
- ratios (2 and 3-part ratios, proportions)
- number sequences (complete the sequence, predict the next term, find rule given a sequence)

2. Algebra

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

3. Geometry

- angles (vertically opposite angles, corresponding, alternate, co-interior angles, angles and exterior angles of triangle, isosceles triangle properties, angles of a quadrilateral, special quadrilaterals)
- 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)
- transformations of figures – reflection, translation, rotation
- congruent triangles, similar triangles

4. Data

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