



# KANGAROO MATH COMPETITION SYLLABUS

- **Pre-Ecolier (Grade 1-2)**

- simple arithmetic operations with 1 digit and 2 digit numbers.
- distinguishing simple figures.
- time, clock.
- number of days in a week, number of months in a year.

- **Ecolier (Grade 3-4)**

- simple arithmetic operations with 1,2,3 and 4 digit numbers.
- recognizing geometric figures.
- a magic square with a sum of 15.
- time, clock.
- number of days in a week, number of months in a year.
- addition, subtraction, multiplication, division.
- intersection of sets.
- perimeter and area of a square, a rectangle.

- **Benjamin (Grade 5-6)**

- addition, subtraction, multiplication, division.
- magic squares.
- fractions and decimals.
- clock, a calendar.
- perimeter of a polygon.
- area of a rectangle and a triangle.
- lines and rays on a surface.
- a cube, a rectangular solid.
- acute, right, and obtuse angles.
- mathematical logic.

- **Cadet (Grade 7-8)**

- operations on rational numbers.
- powers of natural numbers.
- equations, inequalities and systems of linear equations.
- area of a rectangle, a triangle and a circle.
- lines and rays on a surface.
- volume and surface area of geometric figures.
- angles: acute, right, and obtuse.
- supplementary angles, sum of angles in a triangle and in a quadrilateral.
- mathematical logic.

- **Junior (Grade 9-10)**

- operations on real numbers.
- functions, polynomials, equations, inequalities.
- sequences of numbers.
- elements of combinatorics.
- synthetic plane geometry.
- analytic plane geometry.

- **Student (Grade 11-12)**

- operations on real numbers.
- functions, polynomials, equations, inequalities.
- sequences of numbers.
- elements of combinatorics.
- synthetic plane geometry.
- analytic plane geometry.
- synthetic space geometry.
- analytic space geometry.

Papers may include topics which are related to or are extension of the topics listed.