



MATH DEPARTMENT

Year of 2026-2027

Lessons required for the Math Entrance Exam: (Grade 7Bac/7ADP to 8Bac/8ADP)

*Calculator is not allowed.

1) Powers

Students should be able to:

- Apply the rules of exponents.
- Simplify powers and write as a form of one power.

2) G.C.F and L.C.M

Students should be able to:

- Write the prime factorization of a number.
- Find G.C.F and L.C.M. of two given numbers.

3) Algebraic Expressions / Polynomials

Students should be able to:

- Simplify, expand and factorize algebraic expressions.

4) Equations

Students should be able to:

- Solve equations (one-step and multi-step equations).

5) Proportionality

Students should be able to:

- Identify that a certain given is a proportion.
- Find the missing number of a proportion by cross multiplication or proportional reasoning.
- Find the percent of a number.
- Solve real world problems involving proportionality and percentages.

6) Coordinate System (Location)

Students should be able to:

- Locate points on a coordinate system.
- Find the coordinates of the midpoint of a segment.
- Find the orthogonal projection of a point on x-axis/y-axis.
- Calculate the area and perimeter of triangle, rectangle and square.
- Locate a point that is the symmetry of another point with respect to a point/line.

7) Angles and parallel lines

Students should be able to:

- Identify and find supplementary, complementary and vertically opposite angles.
- Identify and find the different types of angles formed by parallel lines and a transversal including alternate interior angles and corresponding angles.

8) Remarkable Lines and Triangles

Students should be able to:

- Construct and use the properties of the medians, bisectors, altitudes, and perpendicular bisectors in any triangle and determine their point of intersection.
- Prove remarkable lines.
- Determine missing angle measures in a triangle using properties of sum of angles in triangles and types of angles (complimentary, supplementary, vertically opposite,...).

9) Congruent Triangles

Students should be able to:

- Prove that two triangles are congruent by SSS, ASA, SAS, AAS, HS and HA.
- Use the transitive, reflexive and symmetric properties in the justification.
- Identify homologous elements of congruent triangles.