

The International Medical Admissions Test (IMAT)

Required Mathematics Topics [2024]

1. Number Sets

- a. Natural Numbers
- b. Integers
- c. Rational & Irrational Numbers
- d. Real Numbers
- e. Numbers Operations [HCF/GCF and LCM]
- f. Proportions and Percentages
- g. Order of Magnitude and Scientific Notation

2. The Heart of Algebra

- a. Simplifying Algebraic Expressions
- b. Exponents and Radicals
- c. Solving Linear Equations and Inequalities
- d. Factoring Methods

3. Functions

- a. Polynomials (Constant, Linear, and Quadratic)
- b. Exponential and Logarithmic
- c. Rational
- d. Composite (Compound) Functions
- e. Inverse Functions
- f. Trigonometric (Goniometric)

4. Advanced Algebra

- a. Solving Quadratic Inequalities
- b. Systems of Equations and Inequalities
- c. Properties of Logarithms [Common and Natural Log]
- d. Solving Power Equations
- e. Basic Combinatorial Calculus
- f. Binomial Expansion and Pascal Triangle

5. Trigonometry

- a. Basic Identities
- b. The Unit Circle
- c. Right-angled Triangles
- d. Radian Measure
- e. Sector Area and Arc Length
- f. Solving Trigonometric Equations

6. Geometry

- a. **Polygons**
- b. **Areas and Perimeters**
- c. **Volume of Solids**
- d. **Parallelism and Perpendicularity**
- e. **Similarities**
- f. **Coordinate Geometry [Distance and Mid-Point formulae]**
- g. **Pythagorean Theorem**
- h. **Conic Sections [Circles, Parabolas, Hyperbolas and Ellipses]**

7. Statistics

- a. **Measures of Central Tendency [Mean, Median and Mode]**
- b. **Measures of Location [Quartiles and Percentiles]**
- c. **Frequency Distributions**

8. Probability Techniques

- a. **Random Experiment and Sample Space**
- b. **Theoretical Probability**