

# MAT

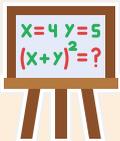
[MATHEMATICS ADMISSIONS TEST]

## Custom program

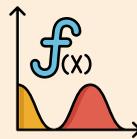
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48 hours

Algebra



Calculus



Integration



Geometry



Number Theory



Logarithm



# Algebra

12 hours

Lesson	Topics
Lesson 1	Basic of Functions, Graph of function
Lesson 2	Composition of Functions
Lesson 3	Quadratics
Lesson 4	Quadratic Inequality
Lesson 5	Polynomials, Operation on Polynomial , Remainder Theorem
Lesson 6	Polynomial Roots of Unity
Lesson 7	Polynomial Root 2, Vieta's Theorem
Lesson 8	Inequality Day - 1, (A.M, G.M)
Lesson 9	Sequence and Series 1, (A.P, G.P)
Lesson 10	Sequence and Series 2, (Telescoping Sum, Polynomial Series)
Lesson 11	Exponent and Logarithms
Lesson 12	Trigonometric Functions

# Calculus

8 hours

Lesson	Topics
Lesson 1	Tangent Lines and Rates of Change
Lesson 2	The Derivative Function
Lesson 3	Introduction to Techniques of Differentiation
Lesson 4	Product & Quotient Rules
Lesson 5	Derivatives of Trigonometric Functions
Lesson 6	Chain Rule
Lesson 7	Absolute Maxima and Minima
Lesson 8	Applied Max/Min Problems

# Integration

6 hours

Lesson	Topics
Lesson 1	The Indefinite Integral
Lesson 2	Integration by Substitution
Lesson 3	The Definition of Area as a Limit; Sigma Notation
Lesson 4	The Definite Integral
Lesson 5	Areas between Curves
Lesson 6	6.2 volumes by Cross Sections/Disks/Washers

# Number Theory

4 hours

Lesson 1	Divisibility
Lesson 2	GCD, LCM, Euclidean Algorithm
Lesson 3	Diophantine Equations
Lesson 4	Linear Congruence and Properties

# Geometry

9 hours

Lesson	Topics
Lesson 1	Properties of Triangle
Lesson 2	Congruent Triangles
Lesson 3	Similarity of Triangles
Lesson 4	Triangular Inequality
Lesson 5	Problem Related Area, Perimeter of Triangle (Heron's Formula)
Lesson 6	Properties of Circle
Lesson 7	Tangent to circle
Lesson 8	Coordinate geometry: Lines, circles, conics (parabolas, ellipses, hyperbolas)
Lesson 9	Vectors: Addition, subtraction, scalar product, applications

# Logarithm

3 hours

Lesson	Topics
Lesson 1	Logarithm of the Product
Lesson 2	The Logarithm of the Quotient
Lesson 3	Common System of Logarithms

# Thank You



Passion for Mathematical Science

Let us know if you need more information.



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