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**CLASS 10**  
**MATHEMATICS**  
**SYLLABUS**  
**2022-23**

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**SYLLABUS****CHAPTER-1: REAL NUMBERS**

- 1.1 Introduction
- 1.2 Euclid's Division Lemma
- 1.3 The Fundamental Theorem of Arithmetic
- 1.4 Revisiting Irrational Numbers
- 1.5 Revisiting Rational Numbers and Their Decimal Expansions
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- 2.2 Geometrical Meaning of the Zeroes of a Polynomial
- 2.3 Relationship between Zeroes and Coefficients of a Polynomial
- 2.4 Division Algorithm for Polynomials
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- 3.2 Pair of Linear Equations in Two Variables
- 3.3 Graphical Method of Solution of a Pair of Linear Equations
- 3.4 Algebraic Methods of Solving a Pair of Linear Equations
  - 3.4.1 Substitution Method
  - 3.4.2 Elimination Method
  - 3.4.3 Cross-Multiplication Method
- 3.5 Equations Reducible to a Pair of Linear Equations in Two Variables
- 3.6 Summary

**CHAPTER-4: QUADRATIC EQUATIONS**

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- 4.2 Quadratic Equations
- 4.3 Solution of a Quadratic Equation by Factorisation
- 4.4 Solution of a Quadratic Equation by Completing the Square
- 4.5 Nature of Roots
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**CHAPTER-5: ARITHMETIC PROGRESSIONS**

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- 5.2 Arithmetic Progressions
- 5.3  $n$ th Term of an AP
- 5.4 Sum of First  $n$  Terms of an AP
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**CHAPTER-6: TRIANGLES**

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- 6.2 Similar Figures
- 6.3 Similarity of Triangles
- 6.4 Criteria for Similarity of Triangles
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- 6.6 Pythagoras Theorem
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- 8.3 Trigonometric Ratios of Some Specific Angles
- 8.4 Trigonometric Ratios of Complementary Angles
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- 13.4 Conversion of Solid from One Shape to Another
- 13.5 Frustum of a Cone
- 13.6 Summary

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A1.3 Deductive Reasoning

A1.4 Conjectures, Theorems, Proofs and Mathematical Reasoning

A1.5 Negation of a Statement

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A1.7 Proof by Contradiction

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A2.1 Introduction

A2.2 Stages in Mathematical Modelling

A2.3 Some Illustrations

A2.4 Why is Mathematical Modelling Important?

A2.5 Summary

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