# DriveEdumax Academy

# Maths

## Curriculum for Grade IX

**Overview**

This curriculum aims to provide students with a strong foundation in mathematics, focusing on essential concepts and problem-solving skills. It builds upon the knowledge acquired in previous grades and prepares students for higher-level mathematics courses.

**Goals**

- Develop a deep understanding of fundamental mathematical concepts.

- Enhance problem-solving and logical reasoning abilities.

- Foster a positive attitude towards mathematics and its applications.

- Prepare students for future academic and career pursuits.

**Pedagogical Approach**

- **Active Learning:** Encourage students to participate actively in class discussions, group activities, and hands-on experiments.

- **Real-World Connections:** Relate mathematical concepts to real-life situations to make learning more meaningful.

- **Technology Integration:** Utilize technology tools to enhance learning and visualization.

- **Collaborative Learning:** Promote teamwork and peer-to-peer learning.

- **Assessment for Learning:** Employ formative assessment strategies to monitor student progress and provide timely feedback.

**Assessment**

- **Summative Assessments:** Conduct periodic tests and examinations to evaluate students' understanding of the curriculum.

- **Formative Assessments:** Use quizzes, assignments, and projects to assess ongoing learning and provide feedback.

- **Practical Assessments:** Evaluate students' ability to apply mathematical concepts to real-world problems.

- **Project-Based Learning:** Assess students' problem-solving, critical thinking, and communication skills through project-based activities.

**Key Features**

- **Comprehensive Coverage:** Address all essential topics in the prescribed textbook.

- **Clear Explanations:** Provide clear and concise explanations of mathematical concepts.

- **Abundant Examples:** Illustrate concepts with numerous examples to aid understanding.

- **Practice Exercises:** Offer ample practice problems to reinforce learning.

- **Real-World Applications:** Connect mathematical concepts to real-life scenarios.

- **Visual Aids:** Use diagrams, graphs, and charts to enhance understanding.

**Chapters Detail**

**1. Number Systems**

- Introduction to irrational numbers.
- Decimal expansions of real numbers.
- Operations on real numbers.
- Laws of exponents for real numbers.

## 2. Polynomials

- Polynomials in one variable.
- Zeroes of a polynomial.
- Factorization of polynomials.
- Algebraic identities.

## 3. Coordinate Geometry

- Cartesian system.
- Plotting points on a coordinate plane.

## 4. Linear Equations in Two Variables

- Introduction to linear equations.
- Solution of a linear equation.

## 5. Introduction to Euclid's Geometry

- Euclid's definitions, axioms, and postulates.

## 6. Lines and Angles

- Basic terms and definitions.
- Intersecting lines and non-intersecting lines.
- Pairs of angles.
- Lines parallel to the same line.

## 7. Triangles

- Congruence of triangles.
- Criteria for congruence of triangles.
- Properties of a triangle.

## 8. Quadrilaterals

- Properties of a parallelogram.
- The mid-point theorem.

## 9. Circles

- Angle subtended by a chord at a point.
- Perpendicular from the center to a chord.
- Equal chords and their distances from the center.
- Angle subtended by an arc of a circle.
- Cyclic quadrilaterals.

**10. Heron's Formula**

- Area of a triangle using Heron's formula.

**11. Surface Areas and Volumes**

- Surface area of a right circular cone.
- Surface area of a sphere.
- Volume of a right circular cone.
- Volume of a sphere.

**12. Statistics**

- Graphical representation of data.

This curriculum provides a solid foundation in mathematics for class 9 students, equipping them

with the necessary knowledge and skills for future studies.