



## GENERAL MATHEMATICS Grade X

Chapter	Topics and Exercises
<b>1.Number system</b>	1.1. Decimal system and Base 1.2. Base five system <b>Exercise-1.1</b> 1.5. Multiplication in Base five System <b>Exercise-1.4</b> 1.6. Basic Operations in Base Two System <b>Exercise-1.5</b>
<b>2.Real Numbers and Co-Ordinate System</b>	2.1. Real Number system. 2.2.Irrational Number System 2.3. Real Numbers 2.4. Properties of the real numbers 2.5. Properties of equality of real numbers 2.6. Properties of inequality of real numbers <b>Exercises.2.1</b>
<b>3. Laws of Exponents and Logarithm</b>	<ul style="list-style-type: none"><li>• Law of Product of Powers</li><li>• Law of power of Fraction</li><li>• Law of division of Powers with the same base.<b>Exercise 3.2</b></li></ul> 3.6. Common Logarithm 3.7. Anti-logarithms 3.4 Scientific Notation <b>Exercise 3.6</b> 3.8. Arithmetical Computations with the help of logarithms. <b>Exercise 3.7</b>
<b>4. Statistics</b>	4.13 Measures of Central Tendency 4.14 Arithmetic Mean <b>Exercise 4.2</b> 4.15. Median 4.16 .Mode <b>Exercise 4.3</b>
<b>5. Ratio, Proportion, Inheritance and Partnership</b>	5.2. Proportion 5.3 Proportion between two sets <b>Exercise 5.2</b> 5.4 Inverse Proportion <b>Exercise 5.3</b> 5.9 Inheritance. <b>Exercise 5.7</b> 5.10 Partnership <b>Exercise 5.8</b>
<b>6. Percentage</b>	6.3. Zakat 6.4. Tax 6.5.Income Tax 6.6. Property Tax 6.7. Custom Duty 6.8.Other Taxes <b>Exercise 6.2</b> 6.9.Discount, Reduction 6.10. Commission, Brokerage <b>Exercise 6.3</b>
<b>7. Fundamental Operations on Polynomials</b>	7.1.Variables 7.2 Algebraic expressions 7.3 Terms of an expression 7.4. Coefficients 7.5. Polynomial 7.6 ordering A polynomial 7.7. Addition of polynomials 7.8. Subtraction of polynomials <b>Exercises: 7.1</b> 7.9 Multiplication of Polynomials <b>Exercises: 7.2</b>



	7.10. Division of Polynomials <b>Exercises: 7.3</b>
<b>8. Formulae and Factors</b>	<p>8.6. uses of Formulae <math>(a \pm b)^2 = a^2 \pm 2ab + b^2</math> <b>Exercises: 8.4</b></p> <p>8.7. Factorization of expressions of the form <math>a^2 \pm 2ab + b^2 = (a \pm b)^2</math> <b>Exercises: 8.5</b></p> <p>8.13. Uses of formulae <math>(a \pm b)^3 = a^3 \pm 3a^2b + 3ab^2 \pm b^3</math> <b>Exercises: 8.11</b></p> <p>8.14. Factorization of expressions of the form <math>a^3 \pm 3a^2b + 3ab^2 \pm b^3 = (a \pm b)^3</math> <b>Exercises: 8.12</b></p> <p>8.15. Uses of Formulae <math>(a^3 \pm b^3) = (a \pm b)(a^2 \mp ab + b^2)</math> <b>Exercises: 8.13</b></p> <p>8.16. Factorization of expressions of the form <math>(a^3 \pm b^3) = (a \pm b)(a^2 \mp ab + b^2)</math> <b>Exercises: 8.14</b></p>
<b>9. Algebraic Sentences, Matrices and Equations</b>	<p>9.3. Matrices <math>2 \times 2</math></p> <p>9.4. Addition of Matrices <b>Exercises: 9.3</b></p> <p>9.5. Multiplication of Matrices <b>Exercises: 9.4</b></p> <p>9.7. Properties of simultaneous equations and their Algebraic solution. <b>Exercises: 9.7</b></p>
<b>10. Geometry</b>	<ul style="list-style-type: none"> <li>• Important Results about Angles. <b>Exercises: 10.3</b></li> <li>• Alternnet angles, corresponding Angles, (Transversal, Interior and Exterior Angles, Corresponding Angles, Alternate Angles) <b>Exercises: 10.5</b></li> <li>• Congruent triangles (Congruent segments and congruent Angles</li> <li>• Correspondence between two triangles.</li> <li>• Congruence of Triangles. <b>Exercises: 10.7</b></li> <li>• Theorem about Congruent Triangles( Experiments 1-4, Theroem 1-4 with examples) <b>Exercises: 10.8</b></li> </ul>
<b>11. Practical Geometry</b>	<ul style="list-style-type: none"> <li>• Pythagoras Theorem <b>Exercises: 11.2</b></li> <li>• Two Special right angled Triangles <b>Exercises: 11.3</b></li> <li>• The slope of a line and its equation</li> <li>• Slope Or Gradient of a line</li> <li>• Slope of Collinear line segments</li> <li>• Slope of Parallel Lines <b>Exercises: 11.6</b></li> <li>• Theorems About Circle (1-4) <b>Exercises: 11.9</b></li> <li>• Length of an arc and area of a sector of a circle</li> </ul> <p><b>Exercises: 11.10</b></p>