

SYLLABUS INDICATOR AND EXAM PORTION
CBSE – 2024-25

Subject: Mathematics

Grade: VII

PHASE 1			
Ch. No.	Chapter Name	Subtopics	PT1 portion Total Marks: 40 Duration: 1 hour 30 minutes
1	Integers	<ul style="list-style-type: none"> ▪ 1.1 Properties of Addition and Subtraction of Integers <ul style="list-style-type: none"> ○ 1.1.1 Closure under Addition ○ 1.1.2 Closure under Subtraction ○ 1.1.3 Commutative Property ○ 1.1.4 Associative Property ○ 1.1.5 Additive Identity ▪ 1.2 Multiplication of Integers <ul style="list-style-type: none"> ○ 1.2.1 Multiplication of a Positive and a Negative Integer ○ 1.2.2 Multiplication of two Negative Integers ▪ 1.3 Properties of Multiplication of Integers <ul style="list-style-type: none"> ○ 1.3.1 Closure under Multiplication ○ 1.3.2 Commutativity of Multiplication ○ 1.3.3 Multiplication by Zero ○ 1.3.4 Multiplicative Identity ○ 1.3.5 Associativity for Multiplication ○ 1.3.6 Distributive Property ▪ 1.4 Division of Integers ▪ 1.5 Properties of Division of Integers 	<ul style="list-style-type: none"> ▪ 1.1 Properties of Addition and Subtraction of Integers <ul style="list-style-type: none"> ○ 1.1.1 Closure under Addition ○ 1.1.2 Closure under Subtraction ○ 1.1.3 Commutative Property ○ 1.1.4 Associative Property ○ 1.1.5 Additive Identity ▪ 1.2 Multiplication of Integers <ul style="list-style-type: none"> ○ 1.2.1 Multiplication of a Positive and a Negative Integer ○ 1.2.2 Multiplication of two Negative Integers ▪ 1.3 Properties of Multiplication of Integers <ul style="list-style-type: none"> ○ 1.3.1 Closure under Multiplication ○ 1.3.2 Commutativity of Multiplication ○ 1.3.3 Multiplication by Zero ○ 1.3.4 Multiplicative Identity ○ 1.3.5 Associativity for Multiplication ○ 1.3.6 Distributive Property ▪ 1.4 Division of Integers ▪ 1.5 Properties of Division of Integers
2	Fractions and Decimals	<ul style="list-style-type: none"> ▪ 2.1 Multiplication of Fractions <ul style="list-style-type: none"> ○ 2.1.1 Multiplication of a Fraction by a Whole Number ○ 2.1.2 Multiplication of a Fraction by a Fraction ▪ 2.2 Division of Fractions <ul style="list-style-type: none"> ○ 2.2.1 Division of Whole Number by a Fraction ○ 2.2.2 Division of a Fraction by a Whole Number ○ 2.2.3 Division of a Fraction by Another Fraction ▪ 2.3 Multiplication of Decimal Numbers 	<ul style="list-style-type: none"> ▪ 2.1 Multiplication of Fractions <ul style="list-style-type: none"> ○ 2.1.1 Multiplication of a Fraction by a Whole Number ○ 2.1.2 Multiplication of a Fraction by a Fraction ▪ 2.2 Division of Fractions <ul style="list-style-type: none"> ○ 2.2.1 Division of Whole Number by a Fraction ○ 2.2.2 Division of a Fraction by a Whole Number ○ 2.2.3 Division of a Fraction by Another Fraction

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		<ul style="list-style-type: none"> ○ 2.3.1 Multiplication of Decimal Numbers by 10, 100 and 1000 ▪ 2.4 Division of Decimal Numbers <ul style="list-style-type: none"> ○ 2.4.1 Division by 10, 100 and 1000 ○ 2.4.2 Division of a Decimal Number by a Whole Number ○ 2.4.3 Division of a Decimal Number by another Decimal Number 	<ul style="list-style-type: none"> ▪ 2.3 Multiplication of Decimal Numbers <ul style="list-style-type: none"> ○ 2.3.1 Multiplication of Decimal Numbers by 10, 100 and 1000 ▪ 2.4 Division of Decimal Numbers <ul style="list-style-type: none"> ○ 2.4.1 Division by 10, 100 and 1000 ○ 2.4.2 Division of a Decimal Number by a Whole Number ○ 2.4.3 Division of a Decimal Number by another Decimal Number
3	Data Handling	<ul style="list-style-type: none"> ▪ 3.1 Representative Values ▪ 3.2 Arithmetic Mean <ul style="list-style-type: none"> ○ 3.2.1 Range ▪ 3.3 Mode <ul style="list-style-type: none"> ○ 3.3.1 Mode of Large Data ▪ 3.4 Median ▪ 3.5 Use of Bar Graphs with a Different Purpose <ul style="list-style-type: none"> ○ 3.5.1 Choosing a Scale 	<ul style="list-style-type: none"> ▪ 3.1 Representative Values ▪ 3.2 Arithmetic Mean <ul style="list-style-type: none"> ○ 3.2.1 Range ▪ 3.3 Mode <ul style="list-style-type: none"> ○ 3.3.1 Mode of Large Data ▪ 3.4 Median ▪ 3.5 Use of Bar Graphs with a Different Purpose <ul style="list-style-type: none"> ○ 3.5.1 Choosing a Scale

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PHASE 2			
Ch. No.	Chapter Name	Subtopics	HYE portion Total Marks: 80 Duration: 3 hours
			PT1 portion is included
4	Simple Equations	<ul style="list-style-type: none"> ▪ 4.1 A Mind-Reading Game! ▪ 4.2 Setting Up of an Equation ▪ 4.3 Review of What We Know ▪ 4.4 What Equation Is? <ul style="list-style-type: none"> ○ 4.4.1 Solving an Equation ▪ 4.5 More Equations ▪ 4.6 Applications of Simple Equations to Practical Situations 	<ul style="list-style-type: none"> ▪ 4.1 A Mind-Reading Game! ▪ 4.2 Setting Up of an Equation ▪ 4.3 Review of What We Know ▪ 4.4 What Equation Is? <ul style="list-style-type: none"> ○ 4.4.1 Solving an Equation ▪ 4.5 More Equations ▪ 4.6 Applications of Simple Equations to Practical Situations
5	Lines and Angles	<ul style="list-style-type: none"> ▪ 5.1 Introduction ▪ 5.2 Related Angles <ul style="list-style-type: none"> ○ 5.2.1 Complementary Angles ○ 5.2.2 Supplementary Angles ▪ 5.3 Pairs of Lines <ul style="list-style-type: none"> ○ 5.3.1 Intersecting Lines ○ 5.3.2 Transversal ○ 5.3.3 Angles Made by A Transversal ○ 5.3.4 Transversal of Parallel Lines ▪ 5.4 Checking For Parallel Lines 	<ul style="list-style-type: none"> ▪ 5.1 Introduction ▪ 5.2 Related Angles <ul style="list-style-type: none"> ○ 5.2.1 Complementary Angles ○ 5.2.2 Supplementary Angles ▪ 5.3 Pairs of Lines <ul style="list-style-type: none"> ○ 5.3.1 Intersecting Lines ○ 5.3.2 Transversal ○ 5.3.3 Angles Made by A Transversal ○ 5.3.4 Transversal of Parallel Lines ▪ 5.4 Checking For Parallel Lines
6	The Triangle and its Properties	<ul style="list-style-type: none"> ▪ 6.1 Introduction ▪ 6.2 Medians of a Triangle ▪ 6.3 Altitudes of a Triangle ▪ 6.4 Exterior Angle of a Triangle and Its Property ▪ 6.5 Angle Sum Property of a Triangle ▪ 6.6 Two Special Triangles: Equilateral and Isosceles ▪ 6.7 Sum of The Lengths of Two Sides of a Triangle ▪ 6.8 Right-Angled Triangles and Pythagoras Property 	<ul style="list-style-type: none"> ▪ 6.1 Introduction ▪ 6.2 Medians of a Triangle ▪ 6.3 Altitudes of a Triangle ▪ 6.4 Exterior Angle of a Triangle and Its Property ▪ 6.5 Angle Sum Property of a Triangle ▪ 6.6 Two Special Triangles: Equilateral and Isosceles ▪ 6.7 Sum of The Lengths of Two Sides of a Triangle ▪ 6.8 Right-Angled Triangles and Pythagoras Property

PHASE 3			
Ch. No.	Chapter Name	Subtopics	PT2 portion Total Marks: 40 Duration: 1 hour 30 minutes
7	Comparing Quantities	<ul style="list-style-type: none"> ▪ 7.1 Percentage – Another Way of Comparing Quantities <ul style="list-style-type: none"> ○ 7.1.1 Meaning of Percentage ○ 7.1.2 Converting Fractional Numbers to Percentage ○ 7.1.3 Converting Decimals to Percentage ○ 7.1.4 Converting Percentages to Fractions or Decimals ○ 7.1.5 Fun with Estimation ▪ 7.2 Use of Percentages <ul style="list-style-type: none"> ○ 7.2.1 Interpreting Percentages ○ 7.2.2 Converting Percentages to “How Many” ○ 7.2.3 Ratios to Percents ○ 7.2.4 Increase or Decrease as Percent ▪ 7.3 Prices Related to An Item or Buying and Selling <ul style="list-style-type: none"> ○ 7.3.1 Profit or Loss as a Percentage ▪ 7.4 Charge Given on Borrowed Money or Simple Interest <ul style="list-style-type: none"> ○ 7.4.1 Interest for Multiple Years 	<ul style="list-style-type: none"> ▪ 7.1 Percentage – Another Way of Comparing Quantities <ul style="list-style-type: none"> ○ 7.1.1 Meaning of Percentage ○ 7.1.2 Converting Fractional Numbers to Percentage ○ 7.1.3 Converting Decimals to Percentage ○ 7.1.4 Converting Percentages to Fractions or Decimals ○ 7.1.5 Fun with Estimation ▪ 7.2 Use of Percentages <ul style="list-style-type: none"> ○ 7.2.1 Interpreting Percentages ○ 7.2.2 Converting Percentages to “How Many” ○ 7.2.3 Ratios to Percents ○ 7.2.4 Increase or Decrease as Percent ▪ 7.3 Prices Related to An Item or Buying and Selling <ul style="list-style-type: none"> ○ 7.3.1 Profit or Loss as a Percentage ▪ 7.4 Charge Given on Borrowed Money or Simple Interest <ul style="list-style-type: none"> ○ 7.4.1 Interest for Multiple Years
8	Rational Numbers	<ul style="list-style-type: none"> ▪ 8.1 Introduction ▪ 8.2 Need for Rational Numbers ▪ 8.3 What are Rational Numbers? ▪ 8.4 Positive and Negative Rational Numbers ▪ 8.5 Rational Numbers on a Number Line 	<ul style="list-style-type: none"> ▪ 8.1 Introduction ▪ 8.2 Need for Rational Numbers ▪ 8.3 What are Rational Numbers? ▪ 8.4 Positive and Negative Rational Numbers ▪ 8.5 Rational Numbers on a Number Line

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		<ul style="list-style-type: none"> ▪ 8.6 Rational Numbers in Standard Form ▪ 8.7 Comparison of Rational Numbers ▪ 8.8 Rational Numbers Between Two Rational Numbers ▪ 8.9 Operations on Rational Numbers <ul style="list-style-type: none"> ○ 8.9.1 Addition ○ 8.9.2 Subtraction ○ 8.9.3 Multiplication ○ 8.9.4 Division 	<ul style="list-style-type: none"> ▪ 8.6 Rational Numbers in Standard Form ▪ 8.7 Comparison of Rational Numbers ▪ 8.8 Rational Numbers Between Two Rational Numbers ▪ 8.9 Operations on Rational Numbers <ul style="list-style-type: none"> ○ 8.9.1 Addition ○ 8.9.2 Subtraction ○ 8.9.3 Multiplication ○ 8.9.4 Division
10	Algebraic Expressions	<ul style="list-style-type: none"> ▪ 10.1 Introduction ▪ 10.2 How are Expressions Formed? ▪ 10.3 Terms of an Expression ▪ 10.4 Like and Unlike Terms ▪ 10.5 Monomials, Binomials, Trinomials and Polynomials ▪ 10.6 Finding the Value of an Expression 	<ul style="list-style-type: none"> ▪ 10.1 Introduction ▪ 10.2 How are Expressions Formed? ▪ 10.3 Terms of an Expression ▪ 10.4 Like and Unlike Terms ▪ 10.5 Monomials, Binomials, Trinomials and Polynomials ▪ 10.6 Finding the Value of an Expression

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PHASE 4			
Ch. No.	Chapter Name	Subtopics	YE portion Total Marks: 80 Duration: 3 hours
			<ul style="list-style-type: none"> ▪ Ch. 4 & Ch. 6 of HYE are included ▪ PT2 portion is included
9	Perimeter and Area	<ul style="list-style-type: none"> ▪ 9.1 Area of A Parallelogram ▪ 9.2 Area of A Triangle ▪ 9.3 Circles <ul style="list-style-type: none"> ○ 9.3.1 Circumference of a Circle ○ 9.3.2 Area of Circle 	<ul style="list-style-type: none"> ▪ 9.1 Area of A Parallelogram ▪ 9.2 Area of A Triangle ▪ 9.3 Circles <ul style="list-style-type: none"> ○ 9.3.1 Circumference of a Circle ○ 9.3.2 Area of Circle
11	Exponents and Powers	<ul style="list-style-type: none"> ▪ 11.1 Introduction ▪ 11.2 Exponents ▪ 11.3 Laws of Exponents <ul style="list-style-type: none"> ○ 11.3.1 Multiplying Powers with the Same Base ○ 11.3.2 Dividing Powers with the Same Base ○ 11.3.3 Taking Power of a Power ○ 11.3.4 Multiplying Powers with the Same Exponents ○ 11.3.5 Dividing Powers with the Same Exponents ▪ 11.4 Miscellaneous Examples Using the Laws of Exponents ▪ 11.5 Decimal Number System ▪ 11.6 Expressing Large Numbers in the Standard Form 	<ul style="list-style-type: none"> ▪ 11.1 Introduction ▪ 11.2 Exponents ▪ 11.3 Laws of Exponents <ul style="list-style-type: none"> ○ 11.3.1 Multiplying Powers with the Same Base ○ 11.3.2 Dividing Powers with the Same Base ○ 11.3.3 Taking Power of a Power ○ 11.3.4 Multiplying Powers with the Same Exponents ○ 11.3.5 Dividing Powers with the Same Exponents ▪ 11.4 Miscellaneous Examples Using the Laws of Exponents ▪ 11.5 Decimal Number System ▪ 11.6 Expressing Large Numbers in the Standard Form
12	Symmetry	<ul style="list-style-type: none"> ▪ 12.1 Introduction ▪ 12.2 Lines of Symmetry for Regular Polygons ▪ 12.3 Rotational Symmetry ▪ 12.4 Line Symmetry and Rotational Symmetry 	<ul style="list-style-type: none"> ▪ 12.1 Introduction ▪ 12.2 Lines of Symmetry for Regular Polygons ▪ 12.3 Rotational Symmetry ▪ 12.4 Line Symmetry and Rotational Symmetry
13	Visualizing Solid Shapes	<ul style="list-style-type: none"> ▪ 13.1 Introduction: Plane Figures and Solid Shapes ▪ 13.2 Faces, Edges and Vertices ▪ 13.3 Nets for Building 3-D Shapes 	<ul style="list-style-type: none"> ▪ 13.1 Introduction: Plane Figures and Solid Shapes ▪ 13.2 Faces, Edges and Vertices ▪ 13.3 Nets for Building 3-D Shapes

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		<ul style="list-style-type: none"> ▪ 13.4 Drawing Solids on a Flat Surface <ul style="list-style-type: none"> ○ 13.4.1 Oblique Sketches ○ 13.4.2 Isometric Sketches ○ 13.4.3 Visualising Solid Objects ▪ 13.5 Viewing Different Sections of a Solid <ul style="list-style-type: none"> ○ 13.5.1 One Way to View an Object is by Cutting or Slicing ○ 13.5.2 Another Way is by Shadow Play ○ 13.5.3 A Third Way is by Looking at it from Certain Angles to Get Different Views 	<ul style="list-style-type: none"> ▪ 13.4 Drawing Solids on a Flat Surface <ul style="list-style-type: none"> ○ 13.4.1 Oblique Sketches ○ 13.4.2 Isometric Sketches ○ 13.4.3 Visualising Solid Objects ▪ 13.5 Viewing Different Sections of a Solid <ul style="list-style-type: none"> ○ 13.5.1 One Way to View an Object is by Cutting or Slicing ○ 13.5.2 Another Way is by Shadow Play ○ 13.5.3 A Third Way is by Looking at it from Certain Angles to Get Different Views
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