INFANT JESUS CONVENT SCHOOL
ANNUAL PLAN (2023-24)
MATHEMATICS
CLASS: VII

MONTH/NO OF DAYS	TOPIC: SUB TOPIC	OBJECTIVES	AIDS/ACTIVITIES	MULTIPLE INTELLIGENCE SKILLS	LEARNING OUTCOME
APRIL No of Days: 17	**INTEGERS** • Addition/subtraction of integers on number line • Addition/subtraction of integers and their properties. • Multiplication of integers with properties. • Division of integers with properties. Application of integers in day-to-day life.	Students will be able to: • Add/ subtract integers on number line. • Identify different properties of integers. • Compare, add, subtract, multiply and divide integers. Apply knowledge to solve daily life situations related to integers.	**KNOWLEDGE:** • List integers in ascending order. • Locate integers correctly on number line. • Brainstorming by comparing different integers. **SKILLS:** • Reasoning Skills • Writing Skills • Critical Thinking **APPLICATION:** • Discussing temperature of different cities using integers. • Computing marks for a test in case of negative marking.	• Logical-mathematical • Interpersonal • Intrapersonal	Students will be able to: • Evaluate sum or difference of integers. • Apply properties of integers to find product of integers. • Practice division of integers and their application • Compute day-to-day life problems related to integers.

			• Classifying and using different properties of integers. **UNDERSTANDING:** • Calculate profit/loss using integers. • Compare maximum and minimum temperature.		
MAY No of Days: 12	**VISUALISING SOLID SHAPES:** • Different 3-D shapes • Views of 3-D shapes • Nets of solid figures. • Views of solids after cutting/slicing • Shadow play **FRACTIONS AND DECIMALS** • Fractions and it's types. • Addition, subtraction, multiplication and division of fractions.	Students will be able to: • Differentiate 2-D and 3-D shapes. • Identify top, front and side views of solid figures. • Recognize nets of solids. • Predict shadows of solids. • Distinguish different fractions and decimals.	**KNOWLEDGE:** • Name various 3-D figures with their edges, faces and vertices. • Identify and differentiate different fractions. **SKILLS:** • Reasoning Skills • Aesthetic skills • Critical Thinking **APPLICATION:** • Drawing nets of solid figures. • Identifying solids by their shadows.	• Spatial • Logical-mathematical • Interpersonal • Intrapersonal	Students will be able to: • Recognize each solid and its net. • Express the properties of a solid based on its net, shadow and different views. • Solve fractions and decimals.

			• Calculating range, mean, mode and median. **UNDERSTANDING:** • Observe area of cross section after cutting/slicing of a solid shape. • Discussing addition and subtraction of fractions		
	REVISION: PT-1				
	CONDUCTION OF PT-1 ASSESSMENT (Third Week Of May)				
JULY No of Days: 23	**FRACTIONS AND DECIMALS** • Decimals and it's types. • Addition, subtraction, multiplication and division of decimals **DATA HANDLING:** • Organizing and tabulating data • Range • Mean • Mode • Median	Students will be able to: • Apply different basic operations on fractions and decimals. • Record data in tabular form • Determine Range, mean, mode and median of given data. • Define probability.	**KNOWLEDGE:** • Identify and differentiate different fractions. • Organize data in tabular form. • Identify constants and variables in a simple equation. **SKILLS:** • Reasoning Skills • Aesthetic skills • Critical Thinking	• Logical-mathematical • Interpersonal • Intrapersonal	Students will be able to: • Apply knowledge of fractions and decimals to solve daily life situations. • Explain terms Range, mean,

			APPLICATION:		mode and median.
	• Probability • Bar graph • Double bar graph . **SIMPLE EQUATIONS** • What an equation is? • Solving an equation. • More equations. • From solution to equation. • Applications of simple equations.	• Represent data using bar graph and double bar graph. • Write a simple equation. • Solve equation with different methods. • Form equation from solution. • Use simple equation in solving daily life situations.	• Discussing addition, subtraction, multiplication and division of different fraction and decimals. • Finding the outcomes and probability for given situation. • Representing data using bar graph and double bar graph. • Forming and solving simple equation. **UNDERSTANDING:** • Apply basic operations on fraction and decimals. • Distinguish bar graph and double bar graph. • To frame simple equation and find its solution.		• Recognize outcomes of an event and find probability. • Draw bar graph and double bar graph. • Frame simple equation with given statement. • Find solution of an equation and a situation from daily life.
AUGUST No of Days: 23	**LINES AND ANGLES:** • Complementary angles	Students will be able to:	**KNOWLEDGE:** • Identify parallel and	• Logical-mathematical	Students will be able to:

	• Supplementary angles • Adjacent angles • Linear pair • Vertically opposite angles • Parallel lines and transversal **TRIANGLE AND ITS PROPERTIES:** • Median and altitude of triangles • Exterior angle property of a triangle • Angle sum property of a triangle • Sum of lengths of two sides of a triangle • Pythagoras Property of right triangle **SYMMETRY:** • Lines of symmetry for regular polygon • Rotational symmetry • Line symmetry and rotational symmetry	• Define and interpret complementary and supplementary angles • Identify adjacent, linear pair and vertically opposite angles. • Understand the angles formed by transversal and conditions for parallel lines • Differentiate between median and altitude of triangles. • Distinguish exterior angle, angle sum, triangle inequality	intersecting lines. • Differentiate between different triangles. • Locate symmetry lines in given figures. **SKILLS:** • Reasoning Skills • Writing skills • Critical Thinking **APPLICATION:** • Discussing about different types of angles. • Finding missing angles when a transversal cut two parallel lines. • Discussing about median, altitude, exterior angle, angle sum properties and their applications. • Determining sides of a triangles by	• Interpersonal • Intrapersonal • Spatial	• Recognize Pair of angles formed by transversal • Know conditions of parallelism. • Find the value of unknown angle by using properties of triangle. • Draw median and altitude of different triangles. • Use Pythagoras property in right triangle.

		and Pythagoras property of triangles. • Distinguish line and rotational symmetry. • Find number of lines of symmetry and rotational symmetry for given 2D figures.	using triangle inequality and Pythagoras property. • Differentiating line and rotational symmetry by demonstrating method. **UNDERSTANDING:** • Distinguish different angles. • Identify different angles formed by transversal. • Find each element of a triangle by using different properties of triangles. • Identify number of lines and rotational symmetry for a given 2D figure.		• Categorize line and rotational symmetry for a 2D figure.
SEPTEMBER No of Days: 05	**REVISION: TERM-1**				
CONDUCTION OF TERM-1 ASSESSMENT (Second Week of September)					

| OCTOBER No of Days: 22 | **CONGRUENCE OF TRIANGLES:**
• Congruence of plane figures and line segments.
• Congruence of angles and triangles
• Criteria for congruence of triangles.

COMPARING QUANTITIES:
• Equivalent ratios
• Converting fractions/decimals to percentage
• Converting percentage to fractions/decimals
• Use of percentage
• Profit and loss

Simple interest | Students will be able to:
• Understand meaning of congruence.
• Draw congruent lines and angles.
• Write corresponding parts of congruent triangles.
• Prove two triangles congruent by different congruence criteria.

• Find equivalent ratios and percentage from fraction/decimal and vice-versa. | **KNOWLEDGE:**
• List overlapping 2D figures.
• Know about ratio and proportion.

SKILLS:
• Reasoning Skills
• Analytical Skills
• Critical Thinking
• Observational Skills

APPLICATION:
• Discussing How plane figures can overlap each other.
• Classifying congruent triangles by different congruence criteria (SSS, SAS, ASA, RHS)
• Calculating ratio, proportion and percentage.
• Solving daily life situations and finding simple | • Spatial
• Logical-mathematical
• Interpersonal
• Intrapersonal | Students will be able to:
• Collect congruent objects.
• Design congruent triangles.
• Convert and compare different quantities such as percentage, ratio, fractions and decimals.
• Apply knowledge of profit/loss and simple interest in day-to-day life. |

		• Determine profit/loss and simple interest.	interest or profit/loss. **UNDERSTANDING:** • Compare two congruent line segments and angles. • List all corresponding parts of congruent triangles. • Compare different quantities and determine percentage, profit/loss and simple interest.		
NOVEMBER No of Days: 22	**RATIONAL NUMBERS:** • Positive and negative rational numbers • Rational Comparison of rational numbers • Rational numbers between rational numbers • Addition, subtraction,	Students will be able to: • Define and compare rational numbers. • Represent rational numbers on number line. • Find rational numbers between given	**KNOWLEDGE:** • List different fractions and integers. • Brainstorming by identifying different types of fractions. • Distinguish area and perimeter of 2D figures. **SKILLS:**	• Logical-mathematical • Interpersonal • Intrapersonal • Spatial	Students will be able to: • Arrange rational numbers in ascending/descending orders. • Locate rational number

	multiplication and division of rational numbers. **PERIMETER AND AREA:** • Squares and rectangles • Area of parallelogram and triangle	two rational numbers. • Calculate sum, difference, product and quotient of rational numbers. • Differentiate area and perimeter • Find perimeter and area of square, rectangle, parallelogram and triangle	• Reasoning Skills • Writing Skills • Critical Thinking **APPLICATION:** • Explaining positive and negative rational numbers. • Representing rational numbers on number line. • Computing rational numbers between given two rational numbers. • Adding, subtracting, multiplying and dividing rational numbers. • Finding sides of square and rectangle having area or perimeter. • Calculating area of triangles and parallelogram. **UNDERSTANDING:** • Arrange rational numbers in		on number line. • Recognize rational numbers between a given pair of rational numbers. • Evaluate the sum, difference, product and quotient of different rational numbers. • Determine perimeter and area for a 2D figure. • Interpret areas of parallelogram, triangle and circles.

			ascending and descending order. • Compare two rational numbers and find rational numbers between them. • Observe 2D figure and find its area and perimeter.		
	REVISION: PT-2				
	CONDUCTION OF PT-2 ASSESSMENT (Fourth Week Of November)				
DECEMBER No of Days: 12	**PERIMETER AND AREA:** • Circumference and area of circle • Application of area and perimeter	Students will be able to: • Define and differentiate between circumference and area of circle. • Apply knowledge to solve day to day life problems. .	**KNOWLEDGE:** • Determine perimeter and area of square and rectangles. **SKILLS:** • Reasoning Skills • Writing Skills • Critical Thinking • Observational Skills **APPLICATION:** • Discussing circumference and area of circle.	• Logical-mathematical • Interpersonal • Intrapersonal • Spatial	Students will be able to: • Translate the uses of area perimeter in the form of examples. • Describe the knowledge of mensuration and apply it in day-to-day

			• Solving word problem related to area and perimeter. **UNDERSTANDING:** • Calculate areas of triangles and parallelograms. • Summarize all the topics and apply knowledge to solve day to day life problems.		life problems.
JANUARY No of Days: 18	**ALGEBRAIC EXPRESSIONS:** • Terms of an expression • Like and unlike terms • Types of polynomials • Addition and subtraction of Algebraic expression • Finding the value of an expression	Students will be able to: • Identify the terms of an algebraic expression. • Differentiate like and unlike, monomial binomial and trinomial. • Add/subtract polynomials. • Find the value of and expression.	**KNOWLEDGE:** • Define constant and variables. • Brainstorming by comparing constants and variables. **SKILLS:** • Reasoning Skills • Writing Skills • Critical Thinking **APPLICATION:** • Discussing about terms of an expression.	• Logical-mathematical • Interpersonal • Intrapersonal • Naturalist • Spatial	Students will be able to: • Identify terms of an algebraic expression. • Differentia te like and unlike terms. • Classify monomial, binomial and trinomials. • Examine sum and difference of

			• Identifying like and unlike terms. • Giving examples of different polynomials. • Adding/subtracting expressions with row and column methods. **UNDERSTANDING:** • Classify terms, like – unlike terms, monomial, binomial and trinomials. • Add/subtract polynomials and find the value of an expression.		polynomials.
FEBRUARY No of Days: 23	**EXPONENTS AND POWERS:** • Exponents • Laws of exponents • Decimal number system • Expressing large numbers in the standard form	Students will be able to: • Know meaning of exponents • Use laws to solve exponents.	**KNOWLEDGE:** • Express the difference between Earth and moon in meters and kilometers. **SKILLS:** • Reasoning Skills	• Logical-mathematical • Interpersonal • Intrapersonal	Students will be able to: • Compare different exponential numbers. • Apply laws of

		• Express large numbers in standard form.	• Writing Skills • Critical Thinking **APPLICATION:** • Expressing large numbers using exponents. • Solving exponents using laws of exponents. **UNDERSTANDING:** • Write large numbers in standard form. • Express numbers using decimals and exponents.		exponents. • Express standard form of large numbers.
	REVISION: TERM-2				
MARCH	**CONDUCTION OF TERM-2 ASSESSMENT**				