

Pre-Algebra Lessons

Live 1:1 Sessions

1. Number Sense & Operations

Integers: addition, subtraction, multiplication, division
Fractions, decimals, and percentages
Order of operations (PEMDAS/BODMAS)
Factors, multiples, prime numbers, and divisibility rules
Absolute value

2. Ratios, Proportions & Percents

Understanding and simplifying ratios
Solving proportions
Percent problems (increase, decrease, discounts, tax, simple interest)
Converting between fractions, decimals, and percents

3. Expressions & Equations

Variables and algebraic expressions

Simplifying expressions

Evaluating expressions

Solving one-step and two-step equations

Solving simple inequalities

4. Geometry Basics

Points, lines, angles, and planes

Types of angles (acute, obtuse, right, straight)

Perimeter, area, and volume (triangles, rectangles, circles, prisms)

Properties of triangles and quadrilaterals

Coordinate geometry: plotting points, distance, and midpoint

5. Data Handling & Probability

Reading and interpreting bar graphs, histograms, line plots, and pie charts

Mean, median, mode, and range

Simple probability concepts

Organizing and analyzing data

6. Integers & Rational Numbers

Adding, subtracting, multiplying, and dividing integers

Understanding and using rational numbers (positive and negative fractions & decimals)

Number line applications

7. Introduction to Functions

Understanding the concept of a function

Input-output tables

Simple linear functions and patterns

8. Exponents & Roots

Laws of exponents

Simplifying expressions with exponents

Square roots and cube roots

9. Basic Statistics

Collecting and organizing data

Central tendency measures

Simple data interpretation

Assessment & Practice

Regular quizzes after every unit

Cumulative review exercises

Application-based word problems

End-of-term practice tests

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