

CLASS 9

MATHEMATICS

NCERT SOLUTIONS

NCERT Solutions for Class 9 Mathematics Chapter 8: Predicting What Comes Next?: Exploring Sequences and Progressions – Free PDF Download

Chapter 8 of Class 9 Maths Ganita Manjari Part 1 is Predicting What Comes Next?: Exploring Sequences and Progressions. It introduces number patterns (sequences) and focuses in particular on arithmetic progressions, where each term increases (or decreases) by a fixed amount. These Class 9 Mathematics Chapter 8 soluti...

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Sequences

A **sequence** is an ordered list of numbers following a specific pattern or rule. Each number in the sequence is called a **term**.

Arithmetic Progressions (AP)

An **arithmetic progression** is a sequence in which the difference between any two consecutive terms is constant, called the **common difference (d)**. General form: $a, a+d, a+2d, a+3d, \dots$, where a is the first term.

nth Term of an AP

The formula for the **nth term** of an AP: $a_n = a + (n-1)d$, where a is the first term, d is the common difference, and n is the term number.

Sum of n Terms of an AP

The sum of the first n terms: $S_n = n/2 \times [2a + (n-1)d]$, or equivalently $S_n = n/2 \times (a + a_n)$ when the last term a_n is known.

Identifying an AP

To check if a sequence is an AP, verify that the difference between every pair of consecutive terms is the same throughout the sequence.

Real-Life Applications

Arithmetic progressions model many real situations with constant, steady change — such as savings growing by a fixed amount each month, seats increasing by a fixed number in each row of a theatre, or a ladder's evenly-spaced rungs.

Class 9 Mathematics Chapter 8 – Notes and Extra Questions

Along with these NCERT Solutions, students can also use the [Class 9 Mathematics Chapter 8 Extra Questions](#) and [Class 9 Mathematics Chapter 8 Revision Notes](#) for quick revision and extra practice.

See also: [Chapter 1](#) | [Chapter 2](#) | [Chapter 3](#) | [Chapter 4](#) | [Chapter 5](#) | [Chapter 6](#) | [Chapter 7](#)

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