

CLASS 9

MATHEMATICS

REVISION NOTES

Class 9 Mathematics Chapter 8 Predicting What Comes Next?: Exploring Sequences and Progressions – Revision Notes

Sequences follow a rule from one term to the next, and this chapter zooms in on arithmetic progressions, where a constant common difference lets you find any term or sum using two key formulas.

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Sequences follow a rule from one term to the next, and this chapter zooms in on arithmetic progressions, where a constant common difference lets you find any term or sum using two key formulas.

Sequences

Ordered list of numbers following a rule; each number = a term.

Arithmetic Progression (AP)

Constant common difference (d) between consecutive terms.

Form: $a, a+d, a+2d, \dots$

Key Formulas

n th term: $a_n = a + (n-1)d$.

Sum of n terms: $S_n = n/2 \times [2a + (n-1)d] = n/2 \times (a + a_n)$.

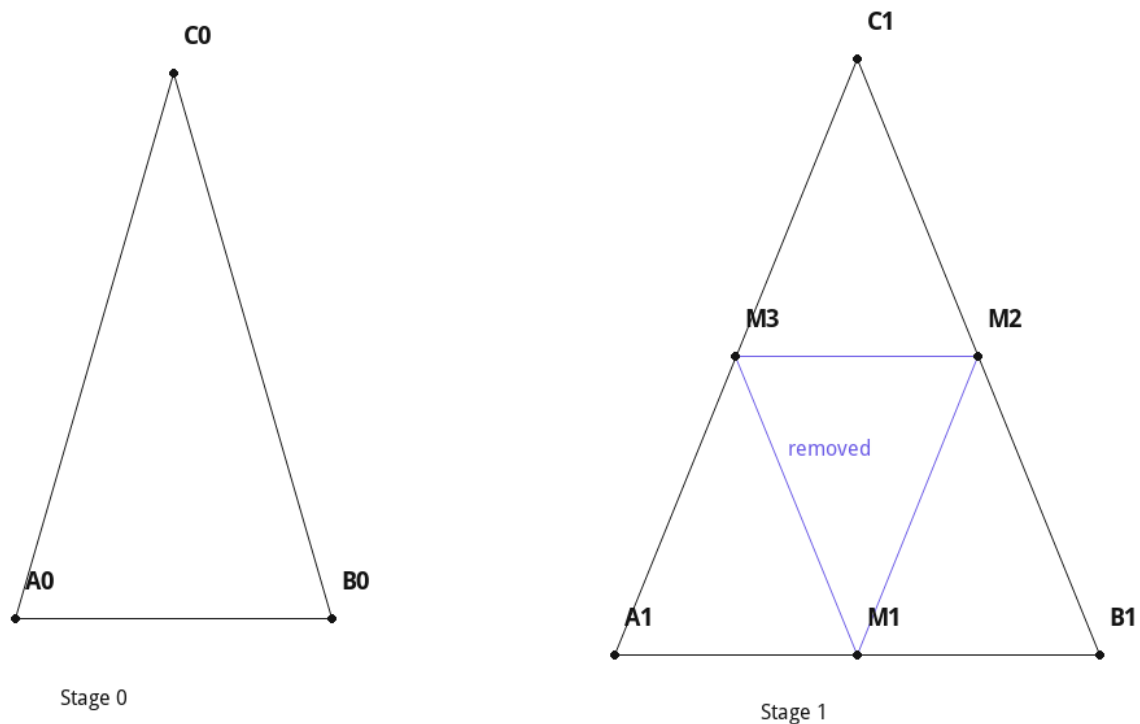
Identifying an AP

Check: difference between every pair of consecutive terms is the same.

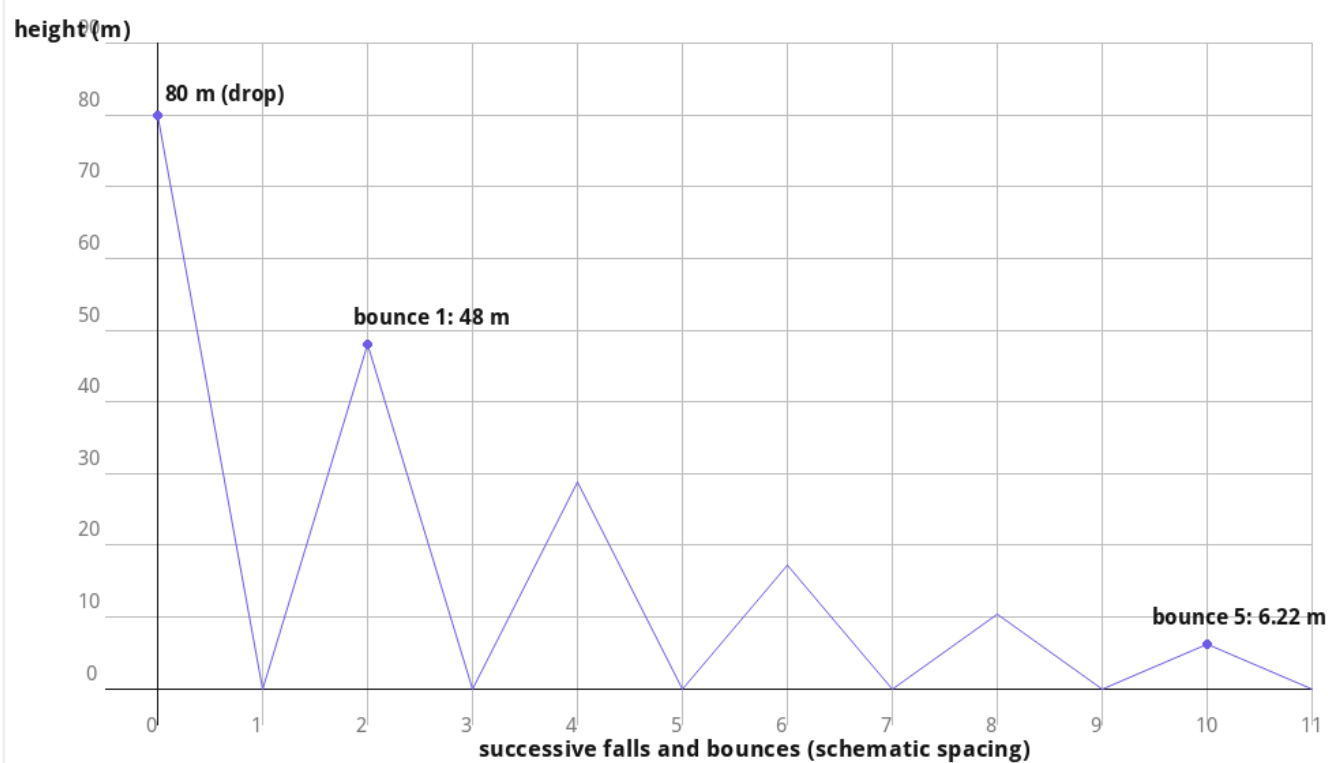
One-Line Summary

An arithmetic progression is a sequence with a constant common difference, and its n th term and sum of n terms can be found directly using two key formulas, useful for modelling steady real-world change.

Quick visual: a worked diagram from the full [Solutions](#) page, for reference.



Sierpinski triangle: the centre (medial) triangle is removed at each stage



Bounce heights form a GP, $r=0.6$: each bounce reaches 60% of the previous height

Need full answers or more practice? See the [Class 9 Mathematics Chapter 8 Solutions](#) and [Class 9 Mathematics Chapter 8 Extra Questions](#).

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