

APPLIED MATHEMATICS · CHAPTER 1

Numbers, Quantification and Numerical Applications

A 1-page guide for parents · 90-second read.

EXPECTED MARKS**15 marks****TIME TO MASTER****Strong hrs****HELPLINE****70330 05444****WHAT THIS CHAPTER IS, IN PLAIN ENGLISH**

This is the opening chapter of your child's Class 11 Applied Mathematics book. Applied Maths is the practical, real-world version of mathematics designed for the Commerce and Humanities streams. This chapter teaches four toolkits: writing numbers in binary (the language computers use), logarithms (a shortcut that turns hard multiplication into easy addition — the engine behind slide rules, pH, decibels and finance), modular arithmetic (the maths of clocks and calendars — 'what day will it be after 100 days?'), and a family of word-problem techniques used in business and daily life: mixing two grades of a product to hit a target price, working out how fast a boat moves against a river current, and how long a tank takes to fill when a pipe is leaking. The mathematics is mostly arithmetic and algebra, but the skill is in translating words and situations into clean calculations.

5 QUESTIONS TO ASK YOUR CHILD

- What is the rule for $\log(a \times b)$? And is there any rule for $\log(a + b)$?
- How do you convert the decimal number 13 into binary?
- If today is Monday, what day will it be after 100 days — and how does 'mod 7' help?
- If a shopkeeper mixes two grades of rice at different prices, how do you find the ratio of the mixture?
- What is the difference between 'downstream' and 'upstream' speed for a boat on a river?

WEAK-SPOT INDICATORS

- If your child writes $\log(a + b) = \log a + \log b$, the core logarithm rule is misunderstood — this single error wrecks most log questions.
- If they cannot convert a small decimal number to binary and back, the easiest 2 marks in the chapter are at risk.
- If they confuse 'downstream' (with the current, faster) and 'upstream' (against the current, slower), the boats question goes wrong every time.
- If they average pipe times instead of adding rates, every pipes-and-cisterns question is lost.

WHEN TO WORRY — AND WHAT TO DO

If, after attempting one question from each of the four toolkits (log, binary, modulo, mixture/boats), your child gets fewer than three correct, schedule one focused 60-90 minute revision session. This chapter rewards drilling, not abstract reasoning — half an hour of practice on logarithm laws and binary conversion usually fixes most of the gap.

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