

PRACTICE WORKBOOK

CLASS 11

Applied Mathematics

Application-led selected practice in numerical tools, algebra, calculus, statistics, finance and coordinate models. Uses the distinct CBSE 2026–27 Applied Mathematics programme.



6 practice units
36 tasks with answer guidance

Name / नाम: _____

Original selected-topic practice. Use alongside school lessons and the prescribed textbook. The contents define this book's scope.

CBSE course 241 · 2026–27 · Selected practice, not a complete syllabus or official examination paper.

UNIT 05 · LOOK & EXPLAIN

Interest, annuities and stated charges

Year-end deposits grow for different times

Worked example: ₹1000 at each year-end, illustrative 10% interest

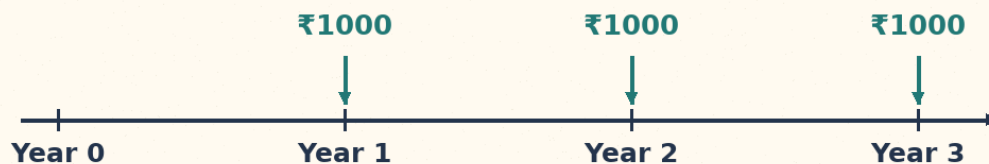
Value at the end of year 3

$$\text{₹1210} + \text{₹1100} + \text{₹1000} = \text{₹3310}$$

$$\text{Year 1 deposit: } \text{₹1000} \times 1.1^2 = \text{₹1210}$$

$$\text{Year 2 deposit: } \text{₹1000} \times 1.1 = \text{₹1100}$$

$$\text{Year 3 deposit: } \text{₹1000} = \text{₹1000}$$



Deposits are made after each year ends. The third deposit earns no interest before valuation.

Use the labels and worked example to explain the idea. The diagram is schematic unless a scale is given.

Look, annotate and explain

Identify the parts or values that matter. Add a label or annotation to show a connection. Explain how the diagram supports the worked example, then use it with the practice on the next page.

UNIT 01 · APPLY & EXPLAIN

Numerical tools for everyday models

4. Find the smaller angle between clock hands at 3:20. [2 marks]

5. Workers A and B finish a task separately in 8 and 12 days. Find their joint completion time at constant independent rates. [2 marks]

6. A cyclist travels 12 km at 12 km/h and another 12 km at 6 km/h. Find the average speed for the whole trip. [3 marks]

Show your thinking with a drawing, diagram or explanation.

Pause & reflect

What can I explain now? What will I try again?

☐ I tried ☐ I explained ☐ I checked



UNIT 01 · ANSWER GUIDANCE

Numerical tools for everyday models

1. $101101_2 = 32 + 8 + 4 + 1 = 45$. $19 = 16 + 2 + 1$, so $19 = 10011_2$.
2. $3 - 1 = 2$; equivalently $\log_{10}(100) = 2$.
3. $32 = 2^5$, so $x + 1 = 5$ and $x = 4$.
4. Minute angle from 12 = $20 \times 6 = 120^\circ$. Hour angle = $3 \times 30 + 20 \times 0.5 = 100^\circ$. Smaller difference = 20° .
5. Combined rate = $1/8 + 1/12 = 5/24$ task/day. Time = $24/5 = 4.8$ days.
6. Total distance = 24 km. Time = $12/12 + 12/6 = 3$ hours. Average speed = $24/3 = 8$ km/h; it is not the arithmetic mean 9.

Teaching note

Average speed uses total distance divided by total time.

Curriculum reference: https://cbseacademic.nic.in/web_material/CurriculumMain27/SecPart2/Applied_Mathematics_SecP2_2026-27.pdf

Selected units; outcomes are publisher-defined. Practical, project and prescribed literature requirements must also be studied through school.