



SATISH CHANDRA MEMORIAL SCHOOL
CASE STUDY BASED EXAMINATION
STD-VII

D.O.E.-01/09/2026
MM 14

Case Study 1: Planning a School Garden

The Eco Club plans a rectangular garden. Its length is x m and its breadth is $(x-4)$ m. A square flower bed of side y m is planned inside the garden.



Answer the following questions:

1. The gardener writes the perimeter of the garden as $(4x-8)$. Is he correct? Give a reason.
2. A student writes the area of the garden as $(x^2 - 4)$. Identify and explain the error.
3. If the value of x increases by 2, what happens to the breadth of the garden?
4. If $x=10$, is the garden twice as long as it is broad? Justify your answer.
5. If the length becomes $(x+3)$ m, while the breadth remains $(x-4)$ m, write the new perimeter expression.
6. The principal wants a garden with a perimeter of 32 m. Can this plan achieve it? Find the value of x .
7. The flower bed has side $y=(x-7)$ m. Write its perimeter using only x .

Case Study 2: The School Science Fair

The school is hosting an exciting Science Fair Day. Students must follow the timetable carefully. The Welcome Session begins at 8:15 a.m.. The Science Experiment begins after that. After the experiment, students have a 0.25-hour break.

The Robotics Challenge starts at 10:00 a.m.. Then the Model Exhibition begins. The final 0.25-hour quiz ends at 11:30 a.m. (half past eleven).



1. The experiment begins at quarter to nine and lasts 0.50 hour. At what time does it end? Explain.
2. The break lasts 0.25 hour. How many minutes is this?
3. The Robotics Challenge lasts 0.75 hour. Does it finish before the Model Exhibition at quarter to eleven? Justify.
4. The quiz ends at half past eleven. At what time did it begin?
5. Which is longer: the time from 8:15 to 8:45 or 0.75 hour? Explain your comparison.
6. A student says 0.50 hour means 50 minutes. Is the student correct? Explain .
7. The Model Exhibition starts at quarter to eleven. If it lasts 0.50 hour, will it finish before the quiz begins? Justify.