



Attempt questions first; check the separate key afterward. Show all working. Draw accurate figures where required.

A. Very short answers - 1 mark each

1. Find area of a rectangle 12 cm by 7 cm.
2. Find area of a square of side 9 cm.
3. Find area of a triangle of base 14 cm and height 8 cm.
4. Find its height if base is 16 cm and area 72 cm^2 .
5. A parallelogram has base 18 cm and perpendicular height 6 cm. Find area.
6. Is its slant side always usable as height?
7. Find area of a rhombus with diagonals 12 cm and 16 cm.
8. Find a missing diagonal if area is 90 cm^2 and the other is 15 cm.

B. Short answers / practice - 2 marks each

9. A trapezium has parallel sides 8, 14 cm and height 5 cm. Find area.
10. Find height if parallel sides are 10, 16 cm and area 104 cm^2 .
11. Convert 2.5 m^2 into cm^2 .
12. Convert 35000 m^2 into hectares.
13. A 20 m by 15 m garden has an inside border 1 m wide. Find border area.
14. Find the remaining inner area.
15. A triangle and parallelogram have the same base and height. Compare areas.
16. Explain this using a diagonal of a parallelogram.
17. Find the area of a right triangle with legs 15 cm and 8 cm.
18. Find the area of a rectangle with the same sides.
19. How many 20 cm square tiles cover a 4 m by 3 m floor?
20. Find tile cost at ₹25 each.

C. Application / reasoning - 3 marks each

21. An L-shape is a 10×8 rectangle with a 4×3 corner removed, dimensions in cm. Find area.

22. Draw and label the decomposition.

23. A kite has perpendicular diagonals 18 cm and 10 cm. Find area.

24. Explain the diagonal formula by splitting it into triangles.

25. A triangle's base doubles while height halves. What happens to area?

26. If both base and height triple, what is the area factor?

27. A parallelogram has area 144 cm^2 and base 16 cm. Find height.

28. A trapezium has area 120 cm^2 , height 8 cm and one parallel side 12 cm. Find the other.

29. A rhombus has diagonals in ratio 3:4 and area 96 cm^2 . Find diagonals.

30. Find the cost of grassing a triangular plot of base 24 m and height 15 m at ₹30/ m^2 .

31. A 12 m by 8 m rectangular floor has a 4 m by 3 m carpet. Find uncovered area.

D. Extended practice - 5 marks per pair

32. Two rectangles have perimeter 40 cm: 12×8 and 15×5 . Compare areas.

33. Does equal perimeter guarantee equal area?

34. Derive the trapezium area formula using two identical trapeziums.

35. A field is a rectangle $30 \times 20 \text{ m}$ with a triangular extension of base 20 m and height 12 m. Find total area.

ANSWER KEY - Numerical / closed questions

- 1) 84 cm^2 . 2) 81 cm^2 . 3) 56 cm^2 . 4) 9 cm. 5) 108 cm^2 . 6) No. 7) 96 cm^2 . 8) 12 cm. 9) 55 cm^2 . 10) 8 cm. 11) 25000 cm^2 . 12) 3.5 ha. 13) 66 m^2 . 14) 234 m^2 . 15) 1:2. 16) 60 cm^2 . 17) 120 cm^2 . 18) 300. 19) ₹7500. 20) 68 cm^2 . 21) 90 cm^2 . 22) Unchanged. 23) 9. 24) 9 cm. 25) 18 cm. 26) 12 cm, 16 cm. 27) ₹5400. 28) 84 m^2 . 29) 96 cm^2 and 75 cm^2 . 30) No. 31) 720 m^2 .