



Area & Perimeter Planner

Name: _____

Grade: 4 _____

Date: _____

Design and measure spaces. Calculate perimeters for borders & fences and areas for covering & flooring. Show work for multi-step tasks.

Part 1 · Quick Perimeter PERIM

1. Rectangle 8 m by 5 m → Perimeter = _____ m

2. Square side 9 cm → Perimeter = _____ cm

3. Rectangle 12 m by 4 m → Perimeter = _____ m

4. Garden 6 m by 6 m → Perimeter = _____ m

5. Rectangle 15 ft by 2 ft → Perimeter = _____ ft

6. Square side 11 m → Perimeter = _____ m

Part 2 · Quick Area AREA

7. Rectangle 8 m by 5 m → Area = _____ m²

8. Square side 9 cm → Area = _____ cm²

9. Rectangle 12 m by 4 m → Area = _____ m²

10. Garden 6 m by 6 m → Area = _____ m²

11. Rectangle 15 ft by 2 ft → Area = _____ ft²

12. Square side 11 m → Area = _____ m²

Perimeter = sum of all side lengths. Area (rectangles) = length × width.

Part 3 · Compare & Decide

COMPARE

13. Which has larger area: 10×4 or 8×5 ? (Write: first / second)

14. Two rectangles have same perimeter 24 m: 10×2 or 8×4 . Which has larger area? _____

15. Square 7 m vs rectangle $9 \text{ m} \times 5 \text{ m}$: Which has longer perimeter?

16. Which covers more: 6×9 board or 8×7 board? _____

17. If width fixed at 6 m, which length gives greater area: 8 m or 11 m? _____

18. Which has smaller area: 12×3 or 9×4 ? _____

Part 4 · Composite & Additive Shapes

COMPOSE

19. An L-shape made of a 6×4 rectangle attached to a 4×2 rectangle (sharing a 2 m edge). Total area = _____ m^2

20. Two squares side 5 cm placed side-by-side to form a rectangle. Perimeter of new rectangle = _____ cm

21. A hallway 12 m by 2 m plus a room 4 m by 4 m (touching along the 4 m side). Combined area = _____ m^2

22. A rectangular frame outer 14×10 , inner cutout 10×6 . Wood area = _____ m^2

23. T-shape: vertical 9×2 plus centered horizontal 6×2 overlapping a 2×2 area. Total area = _____ m^2

24. Two rectangles 7×3 and 5×3 share the 3-m side forming 12×3 . Perimeter of combined = _____ m

Part 5 · Real-Life Planning PLAN

25. Need fence around 10 m by 7 m yard. Fence length needed = _____ m

26. Tile floor 9 m by 5 m with 1 m^2 tiles. Tiles needed = _____

27. Planting bed 8 m by 3 m; soil bags cover 2 m^2 each. Bags needed = _____

28. A poster area 80 cm^2 could be 8×10 or 5×16 . Which has larger perimeter? _____

29. You have 32 m of fencing for a rectangle. If length is 12 m, width = _____ m

30. Classroom area is 60 m^2 . One rug covers 24 m^2 . Uncovered area = _____ m^2

Part 6 · Challenge & Reasoning THINK

31. A rectangle has perimeter 30 m and one side 8 m. Find the other side length. _____ m (Area?) _____ m^2

32. Two gardens: $A = 9 \times 6$; $B = 12 \times 5$. Same area? (Yes/No) _____ (Compute both)

33. Change only one side of 9×4 to double the area. New dimensions: _____ $\times$ _____

34. A 10×8 patio expands width by 2 m. New area = _____ m^2 (Increase of _____ m^2)

35. Reflection: Which was trickier: perimeter or area? Why (≤ 5 words)?

36. Explain in ≤ 6 words when to find perimeter. _____

Reflections (#35-36) open—accept sensible answers.

Answer Key

1. 26
2. 36
3. 32
4. 24
5. 34
6. 44
7. 40
8. 81
9. 48
10. 36
11. 30
12. 121
13. second ($8 \times 5 = 40$ vs $10 \times 4 = 40$ tie? both 40 $\rightarrow$ either) Accept: equal
14. 8×4 (area 32 vs 20) $\rightarrow 8 \times 4$
15. Rectangle (9×5 perimeter 28 vs square 7 m perimeter 28? 7 m square perimeter=28; rectangle 9×5 perimeter=28 $\rightarrow$ equal) Accept: equal
16. $6 \times 9 = 54$; $8 \times 7 = 56 \rightarrow 8 \times 7$
17. 11 m
18. $12 \times 3 = 36$; $9 \times 4 = 36 \rightarrow 12 \times 3$ smaller? Both 36 $\rightarrow$ ask smaller area answer: 12×3 or 9×4 (equal)
(Accept: equal)
19. $6 \times 4 = 24 + 4 \times 2 = 8$ (overlap none) = 32
20. Two 5 cm squares $\rightarrow$ rectangle 10×5 perimeter = 30
21. $12 \times 2 = 24 + 4 \times 4 = 16 = 40$
22. $14 \times 10 = 140 - (10 \times 6 = 60) = 80$
23. Vertical $9 \times 2 = 18 +$ horizontal $6 \times 2 = 12 -$ overlap $2 \times 2 = 4 \rightarrow 26$
24. Combined 12×3 perimeter = 30
25. $2(10 + 7) = 34$
26. $9 \times 5 = 45$
27. $8 \times 3 = 24 \div 2 = 12$ bags
28. 8×10 perimeter = 36; 5×16 perimeter = 42 $\rightarrow 5 \times 16$
29. Perimeter $32 = 2(12 + w) \rightarrow 16 = 12 + w \rightarrow w = 4$
30. $60 - 24 = 36$
31. Perimeter $30 = 2(8 + w) \rightarrow 15 = 8 + w \rightarrow w = 7$; Area = 56
32. $9 \times 6 = 54$; $12 \times 5 = 60 \rightarrow$ No
33. $9 \times 4 = 36$ need 72 $\rightarrow$ double one dimension: 9×8 or 18×4
34. $10 \times 8 = 80$; new $10 \times 10 = 100$ increase = 20
35. Varies
36. Varies (e.g., "For border length")

Notes: Some comparison items (#13, #15, #18) produce equal results—credit any correct identification with reasoning. Accept equivalent dimensions in #33. Minor arithmetic forms (e.g., 36 m^2 vs 36) must label units.