

Perimeter and Area of Squares and Rectangles

Unit: Geometry - Student Practice Worksheet

Overview: The school wanted a fence around the rectangular garden AND enough grass seed to cover it. Anaya measured the outside edge. Kabir measured the inside surface. Both were right — they were answering two completely different questions.

Practice Questions (30 Total)

Section A - Easy

Q1. Walk the 6 m by 3 m edge. Perimeter?



6 m by 3 m edge

- ☐ A. 18 m
- ☐ B. 9 m
- ☐ C. 18 sq m
- ☐ D. 9 sq m

Q2. The formula for a rectangle's perimeter is:

- ☐ A. length $\times$ width
- ☐ B. $2 \times (\text{length} + \text{width})$
- ☐ C. $4 \times \text{length}$
- ☐ D. length + width

Q3. A square has sides of 5 cm. What is its perimeter?

- ☐ A. 10 cm
- ☐ B. 25 cm
- ☐ C. 20 cm
- ☐ D. 25 sq cm

Q4. Fill the 6 m by 3 m inside. Area?



6 m by 3 m fill

- ☐ A. 18 m
- ☐ B. 18 sq m
- ☐ C. 9 sq m
- ☐ D. 9 m

Q5. The formula for a rectangle's area is:

- ☐ A. $2 \times (\text{length} + \text{width})$
- ☐ B. $4 \times \text{side}$
- ☐ C. $\text{length} \times \text{width}$
- ☐ D. $\text{length} - \text{width}$

Q6. A square has sides of 5 cm. What is its area?

- ☐ A. 20 cm
- ☐ B. 10 sq cm
- ☐ C. 20 sq cm
- ☐ D. 25 sq cm

Q7. Walk the 10 m by 2 m edge. Perimeter?



10 m by 2 m edge

- ☐ A. 24 m
- ☐ B. 20 m
- ☐ C. 20 sq m
- ☐ D. 12 m

Q8. Area is always measured in:

- ☐ A. Square units
- ☐ B. Plain units like metres
- ☐ C. Litres
- ☐ D. Kilograms

Q9. A square has sides of 9 m. What is its perimeter?

- ☐ A. 81 m
- ☐ B. 18 m
- ☐ C. 9 m
- ☐ D. 36 m

Q10. Fill the 10 m by 2 m rectangle. Area?



10 m by 2 m fill

- ☐ A. 12 sq m
- ☐ B. 20 sq m
- ☐ C. 24 sq m
- ☐ D. 20 m

Section B - Medium

Q11. Garden 8 m by 5 m. Fence length around it?



8 m by 5 m fence

- ☐ A. 26 m
- ☐ B. 13 m
- ☐ C. 40 m
- ☐ D. 26 sq m

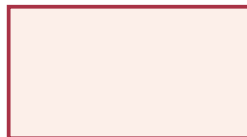
Q12. A square field has a perimeter of 48 m. What is the length of one side?

- ☐ A. 12 m
- ☐ B. 24 m
- ☐ C. 16 m
- ☐ D. 48 m

Q13. A rectangular room is 4.5 m long and 3 m wide. What is its area?

- ☐ A. 15 sq m
- ☐ B. 7.5 sq m
- ☐ C. 13.5 sq m
- ☐ D. 13.5 m

Q14. Garden 8 m by 5 m. Grass area inside?



8 m by 5 m grass

- ☐ A. 26 sq m
- ☐ B. 40 sq m
- ☐ C. 13 sq m
- ☐ D. 40 m

Q15. A rectangle has area 36 sq m and length 9 m. What is its width?

- ☐ A. 3 m
- ☐ B. 27 m
- ☐ C. 4 m
- ☐ D. 4 sq m

Q16. A rectangular room is 4.5 m long and 3 m wide. What is its perimeter?

- ☐ A. 13.5 m
- ☐ B. 7.5 m
- ☐ C. 15 sq m
- ☐ D. 15 m

Q17. Which filled shape is larger, 6x4 or 5x5?



6x4 vs 5x5

- ☐ A. The square (25 sq m)
- ☐ B. The rectangle (24 sq m)
- ☐ C. They are equal
- ☐ D. Cannot be compared

Q18. A rectangle has perimeter 30 m and length 9 m. What is its width?

- ☐ A. 21 m
- ☐ B. 12 m
- ☐ C. 15 m
- ☐ D. 6 m

Q19. A square field has sides of 12 m. What is its area?

- ☐ A. 48 sq m
- ☐ B. 144 sq m
- ☐ C. 24 sq m
- ☐ D. 12 sq m

Q20. A 6 m × 4 m rectangle and a 5 m × 5 m square — compare their perimeters.

- ☐ A. The rectangle's is larger
- ☐ B. They are exactly equal, both 20 m
- ☐ C. The square's is larger
- ☐ D. Cannot be compared without more data

Section C - Challenge

Q21. 20 m by 15 m plot, wall on one 20 m side. Fence needed?



wall on one 20 m side

- ☐ A. 50 m
- ☐ B. 70 m
- ☐ C. 35 m
- ☐ D. 300 m

Q22. Two rectangles have the same perimeter of 20 m but different shapes. Can they have different areas?

- ☐ A. No, equal perimeter always means equal area
- ☐ B. Only if one is a square
- ☐ C. Only for rectangles with a common factor

- ☐ **D.** Yes — same perimeter does not guarantee same area

Q23. A rectangular lawn 12 m by 8 m needs 2 bags of seed for every 24 sq m. How many bags are needed?

- ☐ **A.** 2 bags
- ☐ **B.** 8 bags
- ☐ **C.** 4 bags
- ☐ **D.** 96 bags

Q24. 10 m by 6 m garden plus 1 m path. Outer perimeter?



- ☐ **A.** 40 m
- ☐ **B.** 32 m
- ☐ **C.** 36 m
- ☐ **D.** 44 m

Q25. A rectangle's length is doubled but its width stays the same. What happens to its area?

- ☐ **A.** It stays the same
- ☐ **B.** It becomes four times as large
- ☐ **C.** It halves
- ☐ **D.** It doubles too

Q26. A square garden has the same area as a 16 m $\times$ 4 m rectangle. What is the square's side length?

- ☐ **A.** 10 m
- ☐ **B.** 20 m
- ☐ **C.** 8 m
- ☐ **D.** 64 m

Q27. Square tile of 49 sq cm. Perimeter of its edge?



49 sq cm tile

- ☐ A. 7 cm
- ☐ B. 49 cm
- ☐ C. 28 cm
- ☐ D. 14 cm

Q28. A rectangle's length AND width are both doubled. What happens to its area?

- ☐ A. It becomes four times as large
- ☐ B. It doubles
- ☐ C. It stays the same
- ☐ D. It triples

Q29. A rectangular hall is 15 m long, with an area of 90 sq m. What is its width?

- ☐ A. 5 m
- ☐ B. 6 m
- ☐ C. 7.5 m
- ☐ D. 75 m

Q30. Ms. Rao said 'never give an area answer without the word square attached.' Why does this matter?

- ☐ A. It's just a classroom rule with no real meaning
- ☐ B. Because a bare number could be confused with a perimeter or plain length
- ☐ C. Because area is always bigger than perimeter
- ☐ D. Because square numbers are always even

Answer Key

Q1: (A) (a) 18 m. Perimeter = $2 \times (6+3) = 18$ m.

Q2: (B) (b) $2 \times (\text{length} + \text{width})$.

Q3: (C) (c) 20 cm. Perimeter = $4 \times 5 = 20$ cm.

Q4: (B) (b) 18 sq m. Area = $6 \times 3 = 18$ sq m.

Q5: (C) (c) length $\times$ width.

Q6: (D) (d) 25 sq cm. Area = $5 \times 5 = 25$ sq cm.

Q7: (A) (a) 24 m. Perimeter = $2 \times (10+2) = 24$ m.

Q8: (A) (a) Square units, since it counts unit squares.

Q9: (D) (d) 36 m. Perimeter = $4 \times 9 = 36$ m.

Q10: (B) (b) 20 sq m. Area = $10 \times 2 = 20$ sq m.

Q11: (A) (a) 26 m. Perimeter = $2 \times (8+5) = 26$ m.

Q12: (A) (a) 12 m. Side = $48 \div 4 = 12$ m.

Q13: (C) (c) 13.5 sq m. Area = $4.5 \times 3 = 13.5$ sq m.

Q14: (B) (b) 40 sq m. Area = $8 \times 5 = 40$ sq m.

Q15: (C) (c) 4 m. Width = $36 \div 9 = 4$ m.

Q16: (D) (d) 15 m. Perimeter = $2 \times (4.5+3) = 15$ m.

Q17: (A) (a) The square (25 sq m). Rectangle = 24 sq m, square = 25 sq m — the square is larger.

Q18: (D) (d) 6 m. Half-perimeter is 15 m; 15 minus length 9 gives width 6 m.

Q19: (B) (b) 144 sq m. Area = $12 \times 12 = 144$ sq m.

Q20: (B) (b) They are exactly equal, both 20 m — rectangle: $2 \times (6+4) = 20$; square: $4 \times 5 = 20$.

Q21: (A) (a) 50 m. The two 15 m sides plus the remaining 20 m side: $15 + 15 + 20 = 50$ m.

Q22: (D) (d) Yes — e.g. $9 \times 1 = 9$ sq m and $5 \times 5 = 25$ sq m, both with perimeter 20 m but very different areas.

Q23: (B) (b) 8 bags. Area = 96 sq m; $96 \div 24 = 4$ sets of 24 sq m, needing $4 \times 2 = 8$ bags.

Q24: (A) (a) 40 m. The path adds 1 m on every side, making a 12 m $\times$ 8 m outer rectangle; perimeter = $2 \times (12+8) = 40$ m.

Q25: (D) (d) It doubles — area = length $\times$ width, and doubling one factor doubles the product.

Q26: (C) (c) 8 m. Rectangle area = 64 sq m; a square with area 64 has side 8, since $8 \times 8 = 64$.

Q27: (C) (c) 28 cm. Side = 7 cm (since $7 \times 7 = 49$); perimeter = $4 \times 7 = 28$ cm.

Q28: (A) (a) Four times as large — doubling both factors multiplies the product by $2 \times 2 = 4$.

Q29: (B) (b) 6 m. Width = $90 \div 15 = 6$ m.

Q30: (B) (b) Because a bare number could be confused with a perimeter or plain length — without 'square', the unit is ambiguous.

You've got this! Keep learning and shining! - Ruchi Math Coaching