

CLASS 6

MATHS

EXTRA QUESTIONS

Class 6 Maths Chapter 6 Perimeter and Area Extra Questions

Extra practice questions for Class 6 Maths Chapter 6, "Perimeter and Area", to build confidence with perimeter, area, and real-world applications beyond the textbook's own exercises.

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Extra practice questions for **Class 6 Maths Chapter 6, “Perimeter and Area”**, to build confidence with perimeter, area, and real-world applications beyond the textbook’s own exercises.

Very Short Answer Questions

Q1. What is the formula for the perimeter of a rectangle?

Answer: $2 \times (\text{length} + \text{breadth})$.

Q2. What is the formula for the area of a triangle?

Answer: $\frac{1}{2} \times \text{base} \times \text{height}$.

Q3. Find the perimeter of a square of side 7 cm.

Answer: $4 \times 7 = 28 \text{ cm}$.

Q4. Find the area of a rectangle 9 m by 6 m.

Answer: $9 \times 6 = 54 \text{ sq.m}$.

Q5. In what unit is area measured?

Answer: Square units (e.g., sq.cm, sq.m).

Short Answer Questions

Q6. A rectangular park is 80 m long and 50 m wide. Find the cost of fencing it at Rs.25 per metre.

Answer: Perimeter = $2(80+50) = 260 \text{ m}$. Cost = $260 \times 25 = \text{Rs.6,500}$.

Q7. Find the area of a triangle with base 10 cm and height 6 cm.

Answer: $\frac{1}{2} \times 10 \times 6 = 30 \text{ sq.cm}$.

Q8. A square garden has a perimeter of 48 m. Find its area.

Answer: Side = $48 \div 4 = 12 \text{ m}$. Area = $12 \times 12 = 144 \text{ sq.m}$.

Q9. A rectangle has an area of 72 sq.cm and breadth 8 cm. Find its length and perimeter.

Answer: Length = $72 \div 8 = 9 \text{ cm}$. Perimeter = $2(9+8) = 34 \text{ cm}$.

Q10. A rectangular hall is 40 m by 30 m. It is to be tiled at a cost of Rs.15 per sq.m. Find the total cost.

Answer: Area = $40 \times 30 = 1,200 \text{ sq.m}$. Cost = $1,200 \times 15 = \text{Rs.18,000}$.

Long Answer / Reasoning Questions

Q11. Two rectangles have the same perimeter of 40 cm but different dimensions: one is 15 cm x 5 cm, the other is 10 cm x 10 cm. Compare their areas and explain the pattern.

Answer: First rectangle: area = $15 \times 5 = 75 \text{ sq.cm}$. Second rectangle (a square): area = $10 \times 10 = 100 \text{ sq.cm}$. Even with the same perimeter, the square-shaped rectangle has a **greater area** — this illustrates that among all rectangles with a fixed perimeter, the one closest to a square encloses the most area.

Q12. A farmer wants to fence a rectangular field with 100 m of wire, using whole-number side lengths, to enclose the maximum possible area. What dimensions should the farmer choose, and what is that maximum area?

Answer: With a fixed perimeter of 100 m, $2(l+b)=100$, so $l+b=50$. To maximise area ($l \times b$) with a fixed sum, the dimensions should be as close to equal as possible: **$l = b = 25 \text{ m}$** (a square), giving maximum area = $25 \times 25 = 625 \text{ sq.m}$.

Q13. A path of uniform width 2 m runs around the outside of a rectangular garden measuring 20 m by 15 m. Find the area of the path.

Answer: Outer dimensions including the path: $(20+2+2) \times (15+2+2) = 24 \times 19 = 456$ sq.m. Garden area = $20 \times 15 = 300$ sq.m. Path area = $456 - 300 = \mathbf{156 \text{ sq.m.}}$

Q14. An L-shaped room is formed by removing a $3 \text{ m} \times 2 \text{ m}$ rectangular corner from a $10 \text{ m} \times 8 \text{ m}$ rectangle. Find the area of the L-shaped room.

Answer: Full rectangle area = $10 \times 8 = 80$ sq.m. Removed corner area = $3 \times 2 = 6$ sq.m. L-shaped area = $80 - 6 = \mathbf{74 \text{ sq.m.}}$

Q15. Explain, with an example, why two shapes can have the same area but different perimeters.

Answer: Area measures the surface covered, while perimeter measures the boundary length — these depend on shape in different ways. For example, a $6 \text{ cm} \times 6 \text{ cm}$ square has area 36 sq.cm and perimeter 24 cm, while a $12 \text{ cm} \times 3 \text{ cm}$ rectangle also has area 36 sq.cm but perimeter $2(12+3)=30$ cm. Both enclose the same surface area, but the more elongated shape has a longer boundary.