Perimeter & Area Comprehensive Practice

STANDARD CURRICULUM MASTERY SHEET • EXERCISES 10A & 10B

Total Marks: 100
Time: 90 Minutes

Student Name: ..... **Grade/Sec:** ..... **Date:** ..... **Score:** .....

Key Formulas: Perimeter of Rectangle = 2 × (Length + Breadth) | Perimeter of Square = 4 × Side | Side of Square = Perimeter ÷ 4

PART I: PERIMETER BASICS

1. Find the perimeter of the rectangle with given length (l) and breadth (b)

No.	Length (l)	Breadth (b)	Working & Answer (P = 2 × [l + b])
(a)	4 cm	3 cm	P = _____
(b)	18 m	10 m	P = _____
(c)	9 mm	5.2 mm	P = _____
(d)	4.6 cm	28 mm	P = _____
(e)	2.9 m	80 cm	P = _____
(f)	15.1 km	6.1 km	P = _____
(g)	12.5 m	8.4 m	P = _____
(h)	35 cm	24 cm	P = _____
(i)	0.75 km	420 m	P = _____
(j)	64 mm	3.6 cm	P = _____

2. Find the perimeter of a square with given side length

(a) Side = 16 cm → P = ...

(b) Side = 28 mm → P = ...

(c) Side = 9.6 m → P = ...

(d) Side = 1.89 km → P = ...

(e) Side = 8.9 cm → P = ...

(f) Side = 0.51 m → P = ...

(g) Side = 14.5 cm → P = ...

(h) Side = 42 mm → P = ...

(i) Side = 3.25 m → P = ...

(j) Side = 25 cm → P = ...

3. Complete the table (Find the missing dimension or perimeter)

Item	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Length	12 m	_____	30 mm	_____	24 cm	_____	4.5 m	16 km
Breadth	_____	4 cm	_____	8 cm	_____	15 mm	_____	9 km
Perimeter	48 m	43 cm	80 mm	24 cm	72 cm	50 mm	15 m	_____

PART II: SIDE FROM PERIMETER & WORD APPLICATIONS

4. Find the side length of the square whose perimeter is given

(a) Perimeter = 24 cm → Side = ...

(b) Perimeter = 20.8 cm → Side = ...

(c) Perimeter = 64 m → Side = ...

(d) Perimeter = 8.4 m → Side = ...

(e) Perimeter = 36 mm → Side = ...

(f) Perimeter = 52 cm → Side = ...

(g) Perimeter = 100 m → Side = ...

(h) Perimeter = 14.8 cm → Side = ...

(i) Perimeter = 3.6 km → Side = ...

(j) Perimeter = 72 mm → Side = ...

5. Applied Word Problems on Perimeter and Fencing

5.1 How many metres of fencing are required to enclose a rectangular vegetable garden 19 m long and 5.6 m wide?
Ans: .....

5.2 Mr. Dube wants to put a wooden border around a painting of length 60 cm and breadth 35 cm. What is the cost of framing at ₹30 per cm?
Ans: .....

5.3 How much lace is needed to put around a square cushion of side 56 cm? Find the cost if the lace costs ₹9 per cm.
Ans: .....

5.4 The length of a rectangular park is 0.140 km and breadth is 80 m. Find five rounds of barbed wire required to fence it.
Ans: .....

5.5 Find the cost of fencing the park in Q5.4 if the barbed wire costs ₹5.20 per metre.
Ans: .....

5.6 A rectangular swimming pool has a perimeter of 96 m. If its width is 18 m, what is the length of the swimming pool?
Ans: .....

5.7 An athlete runs 6 rounds around a square field of side 45 m. Calculate the total distance covered by the athlete in metres.
Ans: .....

5.8 A ribbon of length 240 cm is used to border a rectangular chart of length 75 cm. What is the width of the chart paper?
Ans: .....

5.9 A regular decagon (star polygon) has 10 equal sides of length 4.5 cm each. What is the total perimeter of the decagon?
Ans: .....

5.10 A square table top has a side of 1.25 m. Find the cost of polishing its outer boundary strip at ₹15 per metre.
Ans: .....

PART III: AREA FOUNDATIONS

Key Formulas: Area of Rectangle = Length × Breadth | Area of Square = Side × Side | Length = Area ÷ Breadth

6. Complete the table for the area of rectangles

No.	Length	Breadth / Width	Calculation & Final Area
(a)	10 cm	4 cm	Area = _____
(b)	12 km	8 km	Area = _____
(c)	15 mm	6 mm	Area = _____
(d)	18.2 m	9 m	Area = _____
(e)	17 mm	48 mm	Area = _____
(f)	25 m	14 m	Area = _____
(g)	9.5 cm	6 cm	Area = _____
(h)	3.5 m	1.2 m	Area = _____
(i)	40 mm	2.5 cm	Area = _____
(j)	0.6 km	300 m	Area = _____

7. Find the area of a square whose one side is given

(a) Side = 4 cm → Area = ...

(b) Side = 9 cm → Area = ...

(c) Side = 14 cm → Area = ...

(d) Side = 1.8 cm → Area = ...

(e) Side = 2.6 cm → Area = ...

(f) Side = 3.8 m → Area = ...

(g) Side = 12.8 km → Area = ...

(h) Side = 200 m → Area = ...

(i) Side = 15 mm → Area = ...

(j) Side = 0.9 m → Area = ...

8. Missing Dimensions (Finding Length, Breadth, or Side from Area)

No.	Given Area	Known Dimension	Missing Dimension
(a)	Rectangle Area = 75 cm²	Breadth = 5 cm	Length = _____
(b)	Rectangle Area = 70 cm²	Length = 14 cm	Breadth = _____
(c)	Rectangle Area = 180 m²	Breadth = 9 m	Length = _____
(d)	Rectangle Area = 96 mm²	Length = 12 mm	Breadth = _____
(e)	Rectangle Area = 4.8 m²	Length = 3 m	Breadth = _____
(f)	Square Area = 64 cm²	All sides equal	Side = _____
(g)	Square Area = 144 m²	All sides equal	Side = _____
(h)	Square Area = 225 cm²	All sides equal	Side = _____
(i)	Square Area = 1.44 m²	All sides equal	Side = _____
(j)	Square Area = 400 mm²	All sides equal	Side = _____

PART IV: APPLIED AREA & CONCEPT MASTERY

9. Real-World Word Problems on Area

9.1 A rectangular swimming pool measures 16 m by 7.5 m. What is the total floor area of the swimming pool?
Ans: .....

9.2 A wall is 4 m long and 2 m high. What is the area of 3 such walls? How many 10 m² paint cans are needed for 2 coats?
Ans: .....

9.3 A rectangular field measures 300 m by 90 m and a square field measures 180 m by 180 m. Do both fields have equal area?
Ans: .....

9.4 From Q9.3, which field requires more fencing and by how much fencing wire?
Ans: .....

9.5 The length of a chart paper is 125 cm. Its width is three-fifths of its length. What is the area of the chart paper in cm²?
Ans: .....

9.6 Find the cost of leveling a square playground of side 65 m at the rate of ₹12 per square metre.
Ans: .....

9.7 A square carpet of side 2.4 m is laid on a rectangular floor of dimensions 4 m by 3 m. What area of the floor is left bare?
Ans: .....

9.8 A rectangular park is 45 m long and 30 m broad. A 2 m wide path runs all around inside it. Find the area of the path.
Ans: .....

9.9 How many square tiles of side 20 cm are needed to pave the floor of a bathroom measuring 3 m by 2 m?
Ans: .....

9.10 A door of dimensions 2 m × 1 m is fitted on a wall of 4.5 m × 3.6 m. Find the cost of painting the wall at ₹25/m².
Ans: .....

10. Multiple Choice Questions (Select the correct option)

10.1 A rope of length 48 m was used to fence off a square garden. The side of the garden is:
(a) 16 m (b) 12 m
(c) 24 m (d) 96 m

10.2 A regular star polygon has 10 equal sides of length 3 cm. Its perimeter is:
(a) 13 cm (b) 30 cm
(c) 27 cm (d) 300 cm

10.3 Which shape has the greatest area?
(a) Rect: 16 cm × 14 cm (b) Square: 15 cm × 15 cm
(c) Rect: 22 cm × 10 cm (d) Square: 14 cm × 14 cm

10.4 The best estimate for the area of a standard small photoframe is:
(a) 2460 mm² (b) 2460 cm²
(c) 2460 m² (d) 24.6 m²

10.5 The best estimate for the surface area of a single page of a diary is:
(a) 180 m² (b) 180 mm²
(c) 180 cm² (d) 18 cm²

10.6 If the perimeter of a rectangle is 50 cm and its breadth is 10 cm, its length is:
(a) 15 cm (b) 20 cm
(c) 25 cm (d) 30 cm

10.7 If the side of a square is doubled, its perimeter will:
(a) Be halved (b) Double
(c) Quadruple (d) Remain same

10.8 If the side of a square is doubled, its area will become:
(a) 2 times (b) 3 times
(c) 4 times (d) 8 times

10.9 The area of a square is 169 cm². Its perimeter is:
(a) 26 cm (b) 52 cm
(c) 39 cm (d) 48 cm

10.10 Standard unit for expressing the area of a large agricultural farm is:
(a) cm² (b) mm²
(c) m² or km² (d) Metres