

# St. Andrews Scots Sr. Sec. School

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Session: 2024-2025

**Class:** V

**Subject:** Mathematics

**Topic:** unit 15- Perimeter and Area of

Rectilinear figures

## Question to be done:-

Introduction of chapter

Warm up

Perimeter of Square and Rectangle

## Ex:-14A

**Q1-** a, c (notebook)

**Q3-** (notebook)

**Q6, Q8(b, d) and Q10(a)**(notebook)

**Q2-** a(notebook)

**Q5-** (notebook)

**Q7-** (H. W)

## Ex:-14B

**Formula for Area of Square and Rectangle**

**Q1-** b, c, e (notebook)

**Q4 , Q6, Q7, Q9 and Q10**

**Worksheet**

**Q2-** c, d (notebook)

### Exercise 14A

- Perimeter of triangle =  $6 \text{ cm} + 7 \text{ cm} + 3 \text{ cm} = 16 \text{ cm}$
  - Perimeter of triangle =  $8.5 \text{ cm} + 3.5 \text{ cm} + 6 \text{ cm} = 18 \text{ cm}$
  - Perimeter of triangle =  $3 \text{ cm} + 4 \text{ cm} + 6.5 \text{ cm} = 13.5 \text{ cm}$
  - Perimeter of triangle =  $4.5 \text{ cm} + 6.3 \text{ cm} + 8 \text{ cm} = 18.8 \text{ cm}$
- Perimeter of isosceles triangle =  $5.7 \text{ cm} + 5.7 \text{ cm} + 8 \text{ cm} = 19.4 \text{ cm}$
  - Perimeter of equilateral triangle =  $3 \times 9.2 \text{ cm} = 27.6 \text{ cm}$
- Perimeter of triangle =  $20 \text{ cm}$   
Sum of two sides =  $4.2 \text{ cm} + 9 \text{ cm} = 13.2 \text{ cm}$   
Third side =  $20 \text{ cm} - 13.2 \text{ cm} = 6.8 \text{ cm}$
- Perimeter of equilateral triangle =  $18.3 \text{ cm}$   
Side length of equilateral triangle =  $18.3 \div 3 = 6.1 \text{ cm}$
- Length =  $28 \text{ cm}$ , Breadth =  $18 \text{ cm}$   
Perimeter of rectangle =  $2(l + b) = 2(28 + 18) = 2 \times 46 = 92 \text{ cm}$
  - Length =  $30 \text{ m}$ , Breadth =  $15.5 \text{ m}$   
Perimeter of rectangle =  $2(l + b) = 2(30 + 15.5) = 2 \times 45.5 = 91 \text{ m}$
  - Length =  $3 \text{ m } 60 \text{ cm} = 3.60 \text{ m}$   
Breadth =  $2 \text{ m } 10 \text{ cm} = 2.10 \text{ m}$

$$\begin{aligned}\text{Perimeter of rectangle} &= 2(l + b) \\ &= 2(3.60 + 2.10) = 2 \times 5.70 \\ &= 11.40 \text{ m or } 11 \text{ m } 40 \text{ cm}\end{aligned}$$

(d) Length =  $13.7 \text{ m}$ , Breadth =  $8.5 \text{ m}$   
Perimeter of rectangle =  $2(l + b) = 2(13.7 + 8.5)$   
 $= 2 \times 22.2 = 44.4 \text{ m}$

6. Perimeter of rectangle =  $110 \text{ m}$   
 $2(l + b) = 110$   
 $2(35 + b) = 110$   
 $35 + b = \frac{110}{2} \quad \Rightarrow \quad 35 + b = 55$   
 $b = 55 - 35$   
 $b = 20 \text{ m}$   
Hence breadth =  $20 \text{ m}$

7. Perimeter of a square =  $100 \text{ m}$   
Thus, each side of square =  $\text{perimeter} \div 4 = 100 \div 4 = 25 \text{ m}$
8.
  - Side =  $13 \text{ cm}$   
Perimeter of square =  $4 \times \text{side} = 4 \times 13 = 52 \text{ cm}$
  - Side =  $19.5 \text{ cm}$   
Perimeter of square =  $4 \times \text{side} = 4 \times 19.5 = 78 \text{ cm}$
  - Side =  $60 \text{ m}$   
Perimeter of square =  $4 \times \text{side} = 4 \times 60 = 240 \text{ m}$
  - Side =  $4 \text{ m } 35 \text{ cm} = 4.35 \text{ m}$   
Perimeter of square =  $4 \times \text{side} = 4 \times 4.35 = 17.40 \text{ m}$
9. Length of plot =  $75 \text{ m}$   
Breadth of plot =  $61 \text{ m}$   
Perimeter of plot =  $2(l + b) = 2(75 + 61) = 2 \times 136 = 272 \text{ m}$   
Cost of constructing  $1 \text{ m}$  wall = ₹  $170$   
Cost of constructing  $272 \text{ m}$  wall =  $272 \times 170 = ₹ 46,240$
10. Sides of triangular plot are  $43 \text{ m}$ ,  $60 \text{ m}$ ,  $100 \text{ m}$   
Length of the wire = Perimeter of triangular plot  
 $= 43 + 60 + 100 = 203 \text{ m}$

### **Exercise 14B**

1. (a)  $l = 19 \text{ cm}$ ,  $b = 13 \text{ cm}$   
Area of rectangle =  $l \times b = 19 \times 13 = 247 \text{ sq.cm}$
- (b)  $l = 2 \text{ m } 40 \text{ cm} = 2.40 \text{ m}$   
 $b = 1 \text{ m } 90 \text{ cm} = 1.90 \text{ m}$   
Area of rectangle =  $l \times b = 2.40 \times 1.90 = 4.56 \text{ sq.m}$
- (c)  $l = 36.5 \text{ cm}$   
 $b = 18\frac{1}{2} \text{ cm} = 18.5 \text{ cm}$   
Area of rectangle =  $36.5 \times 18.5 = 675.25 \text{ sq.cm}$
- (d)  $l = 16.5 \text{ cm}$ ,  $b = 10 \text{ cm}$   
Area of rectangle =  $l \times b = 16.5 \times 10 = 165 \text{ sq.cm}$
- (e)  $l = 1.5 \text{ m}$   
 $b = 2.5 \text{ m}$   
Area of rectangle =  $l \times b = 1.5 \times 2.5 = 3.75 \text{ sq.m}$
2. (a) Side of a square =  $16 \text{ cm}$   
Area of square = side  $\times$  side =  $16 \times 16 = 256 \text{ sq.cm}$
- (b) Side of square =  $37 \text{ m}$   
Area of square =  $37 \times 37 = 1369 \text{ sq.m}$
- (c) Side of square =  $19.7 \text{ cm}$   
Area of square =  $19.7 \times 19.7 = 388.09 \text{ sq.cm}$
- (d) Side of square =  $4 \text{ m } 15 \text{ cm} = 4.15 \text{ m}$   
Area of square =  $4.15 \times 4.15 = 17.22 \text{ sq.m}$  (approx.)
3. Area of rectangle =  $900 \text{ sq.cm}$   
Breadth =  $25 \text{ cm}$   
Length  $\times$  Breadth = Area  
Length  $\times 25 = 900$   
Length =  $\frac{900}{25} = 36 \text{ cm}$
4. Area of rectangle =  $68 \text{ sq.cm}$   
Length =  $17 \text{ m}$   
Length  $\times$  Breadth = Area  
 $17 \times$  Breadth =  $68$   
Breadth =  $\frac{68}{17} = 4 \text{ m}$
5. Side of square =  $19 \text{ m}$   
Area of square = side  $\times$  side =  $19 \times 19 = 361 \text{ sq.m}$   
Now, length of rectangle =  $19 \text{ m}$   
Breadth of rectangle =  $8 \text{ m}$   
Area of rectangle = length  $\times$  breadth =  $19 \times 8 = 152 \text{ sq.m}$   
Thus, Area of square is larger than area of rectangle.
6. Area of floor =  $18 \text{ m} \times 12 \text{ m} = 216 \text{ sq.m}$  or  $2160000 \text{ sq.cm}$   
Area of a tile =  $24 \text{ cm} \times 15 \text{ cm} = 360 \text{ sq.cm}$   
Number of tiles =  $\frac{\text{Area of floor}}{\text{Area of a tile}} = \frac{2160000}{360} = 6000 \text{ tiles}$
7. Area of house =  $(7 \times 6) \text{ sq.m} + (6 \times 4) \text{ sq.m} + (4 \times 5) \text{ sq.m}$   
 $= 42 \text{ sq.m} + 24 \text{ sq.m} + 20 \text{ sq.m} = 86 \text{ sq.m}$

8. Length of rectangular painting = 2.5 m

Breadth of rectangular painting = 1.5 m

Area of painting =  $2.5 \times 1.5 = 3.75$  sq.m =  $3.75 \times 10000$  sq.cm = 37500 sq.cm

9. Length of field = 320 m

Breadth of field = 210 m

Area of field ploughed =  $320 \times 210$  sq.m = 67200 sq.m

10. Side of square floor = 80 m

Area of square floor =  $80 \times 80$  sq.m = 6400 sq.m

Cost of tiling 1 sq.m = ₹ 0.50

Cost of tiling 6400 sq.m =  $6400 \times 0.50 = ₹ 3200$



