Tender Heart High School, Sec-33B, Chandigarh

Class - IV
Subject - Mathematics

Date - 28.10.2024
Teacher - Ms. Sushma.

## Chapter -10
## Perimeter and Area

**Perimeter :→**
The length of the boundary of a plane figure is called its perimeter.

**Perimeter of a polygon :→**
The perimeter of a polygon is the sum of the length of the sides of the polygons.

Perimeter of a polygon = Sum of the length of the sides of the polygon.

Perimeter of a triangle = Sum of the length of the sides

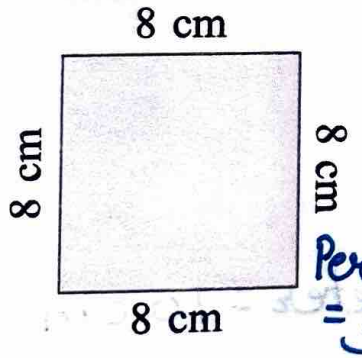
Perimeter of a rectangle = 2 x (Length + Breadth)

Perimeter of a square = 4 x side

## Exercise 10.1

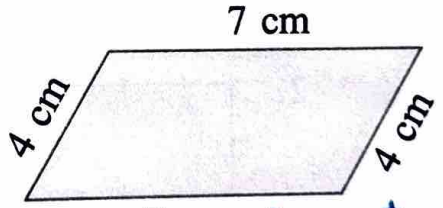
### A. Find the perimeter of each figure.

1.



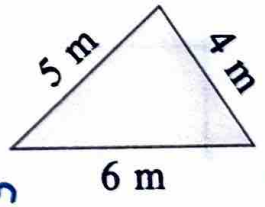

Perimeter = 32 cm

2.



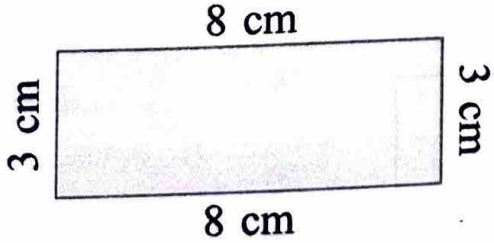

Perimeter = 22 cm

3.



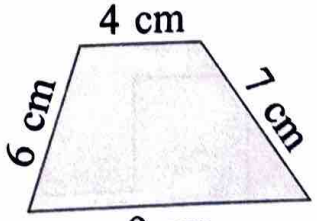

Perimeter = 15 m

4.



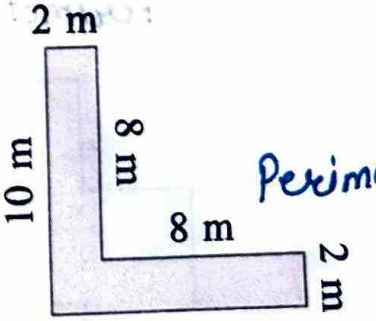

Perimeter = 22 cm

5.



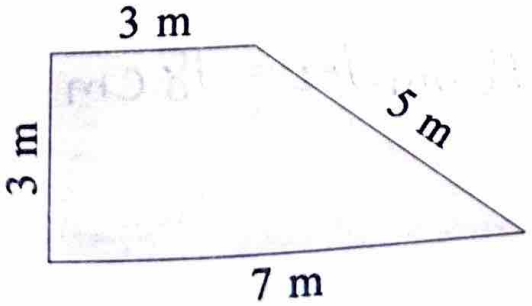

Perimeter = 26 cm

6.



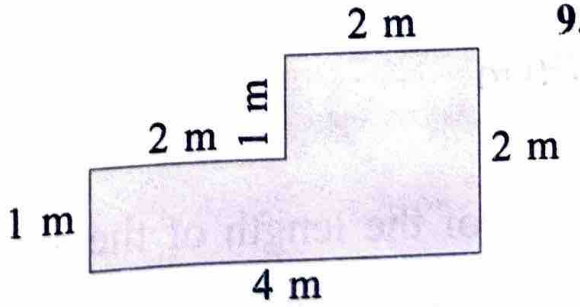

Perimeter = 40m

7.



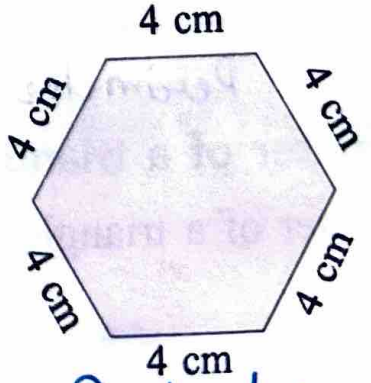

Perimeter = 18 m

8.




Perimeter = 12m

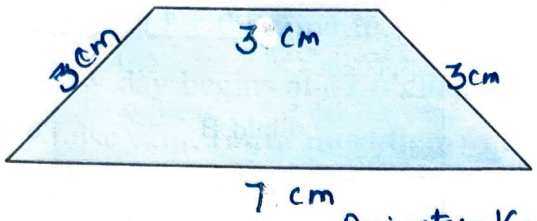
9.




Perimeter = 24 cm

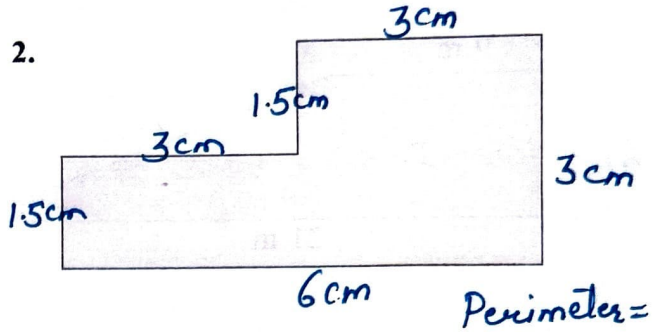
**B. Measure the sides of the given shapes with a scale. Find the perimeter of each one.**

1.




Perimeter = 16cm

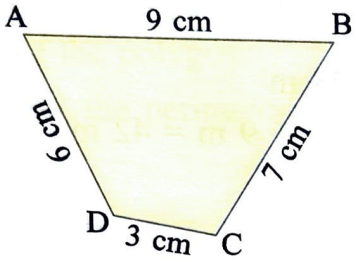
2.




Perimeter = 18cm

**C. Fill in the blanks.**

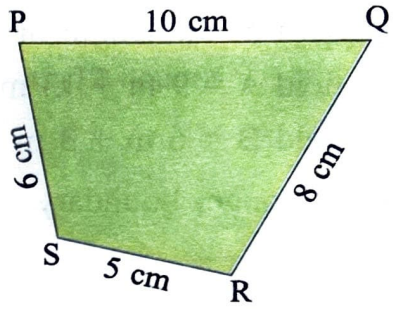
1.




Perimeter of ABCD = 25 cm

So ABCD has a shorter boundary.

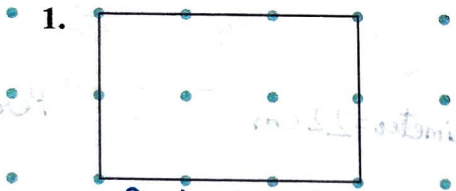
2.




Perimeter of PQRS = 29 cm

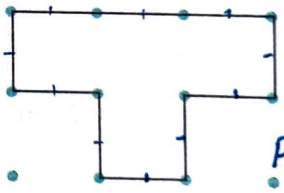
**D. Find the perimeter of each shape. (Given: ——— = 1 cm and | = 1 cm)**

1.



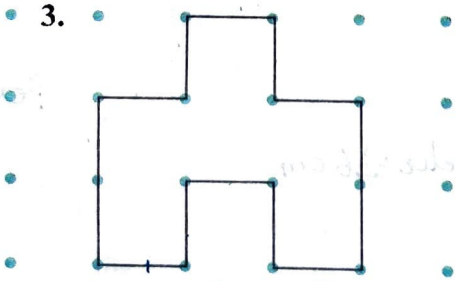
Perimeter = 10 cm

2.



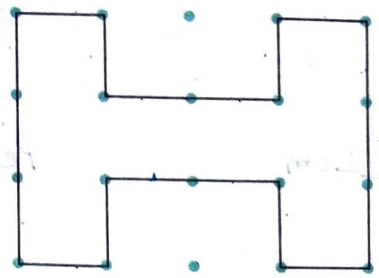
Perimeter = 10 cm

3.



Perimeter = 14cm

4.

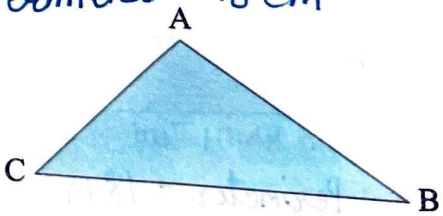


Perimeter = 18 cm

## Perimeter of a triangle

Perimeter of a triangle = Sum of the length of the sides

= AB + BC + CA



## Exercise 10.2

A Find the perimeter of the triangles whose sides measure.

(i) 3cm , 4cm, 5cm

Soln:→ Perimeter of the triangle = Sum of the length of the sides.
= 3 cm + 4cm + 5cm
= 12 cm

(2) 70 cm, 84cm, 97 cm

Soln:- Perimeter of the triangle = 70cm + 84cm + 97cm
= (70 + 84 + 97) cm
= 251 cm

B. Find the perimeter of the rectangles with the following measures.

1. Length of the rectangle = 5cm
Breadth " " " = 4cm
Perimeter of the rectangle = 2 (l + B)
= 2 (5 + 4)
= 2 x 9 = 18 cm

2. Length of the rectangle = 10 cm
Breadth " " " = 3 cm
Perimeter " " " = 2 (l + b)
= 2 (10 + 3)
= 2 (13) = 26 cm

C. Find the perimeter of the squares whose sides measure.

1. 1 cm.

Soln:→ Side of the Square = 1 cm
Perimeter of the Square = 4 x side
= 4 x 1
= 4 cm

2. 9 cm.

Soln:→ Side of the Square = 9 cm
Perimeter " " " = 4 x side
= 4 x 9
= 36 cm

3. 14 m

Soln:→ Side of the Square = 14 m
Perimeter " " " = 4 x side
= 4 x 14
= 56 m

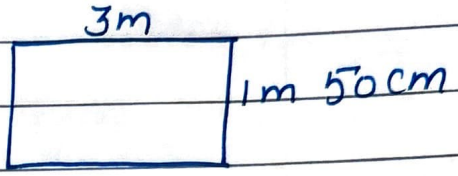
## Exercise 10.3

1. A Square field is 60 m long. How much wire is needed to fence the field?

Soln:→ Length of the square field = 60 m
Perimeter " " " " = 4 x side
= 4 x 60 = 240 m

Hence, 240 m of wire is needed to fence the field.

2. Rehana is fixing lace around a rectangular tablecloth for her sister's birthday celebration. She has a 10m roll of lace. How much lace will be needed. How much lace will be left over.




Soln:→ Length of lace = 10m

Length of rectangular tablecloth = 3m = 3 × 100 = 300cm
Breadth " " " = 1m 50cm
= 1 × 100 + 50
= 150 cm

Perimeter of " " = 2(l + b)
= 2(300 + 150)
= 2(450)
= 900cm = 9m

So, 9m lace will be needed.
Length of lace left = Total length of lace − Length of lace needed
= (10 − 9)m = 1m.

3. Hari Ram has to put wire around the boundary of his rectangular field of length 15m and breadth 10m. What is the length of the wire he must buy?

Soln:→ Length of the rectangular field = 15m
Breadth " " " " = 10m
Perimeter " " " " = 2(l + b)
= 2(15 + 10)
= 2(25)

Length of the wire Hari Ram must buy = 50m
Length of the wire used = 20m.

Length of wire required = (50-20) m
= 30m.

Qn A square mirror of side 30 cm has to be framed. What is the length of the frame needed? Give the answer in metres and centimetres.

Soln:→ Side of a square mirror = 30cm.
Perimeter " " " " = 4 X Side
= 4 X 30 = 120cm
so, Length of the frame needed = 120cm.
= 120 ÷ 100
= 1m 20cm

Qn The breadth of a rectangle is 72 cm. Its length is 4 times its breadth. Find the perimeter of the rectangle.

Soln:→ Breadth of a rectangle = 72cm
Length " " " = 4 X 72 = 288 cm
Perimeter " " " = 2(l+b)
= 2(72+288)
= 2(360)
= 720 cm
∴ The perimeter of a rectangle = 720cm.

Area :→ The area of a closed figure is the amount of surface it covers!

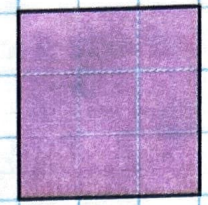
Units of area :→
The standard unit of area is Square units (Sq. units)

## Exercise 10.4

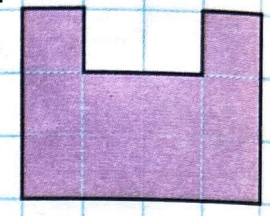
**A. Count the number of squares to find the area. The side of each ☐ is 1 unit.**

1. 

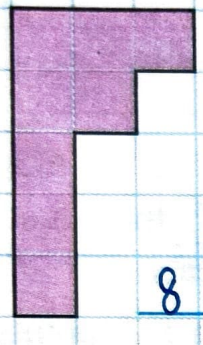
15 square units

2. 

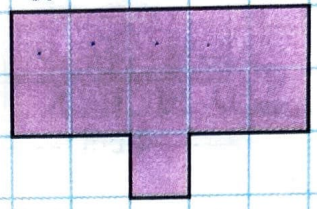
9 square units

3. 

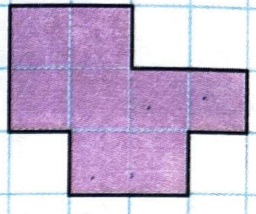
10 square units

4. 

8 square units

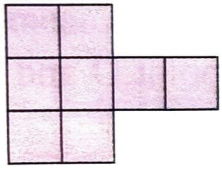
5. 

11 square units

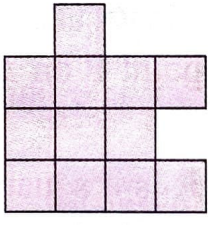
6. 

8 square units

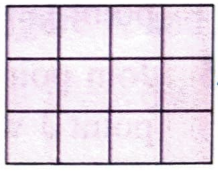
**B. Find the area of these figures. Each ☐ has side 1 cm.**

1. 

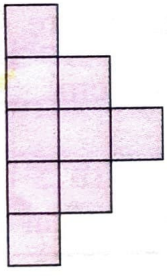
→ 8 sq cm

2. 

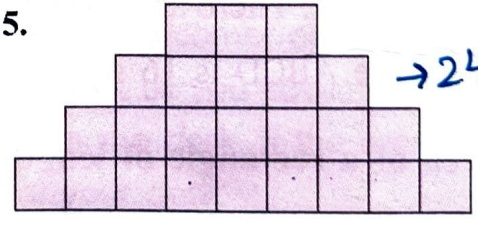
→ 12 sq cm

3. 

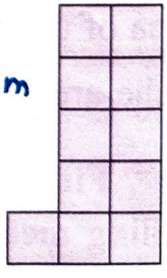
→ 12 sq cm

4. 

→ 9 sq cm

5. 

→ 24 sq cm

6. 

→ 11 sq. cm