



## Let's do and see -

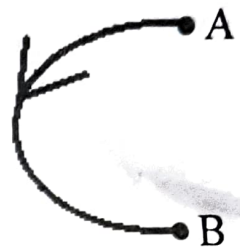
We draw a curve from the point 'A' to the point 'B'

Now tell us, is this figure open or closed? .....

## We saw -

A figure that starts from one point and ends at another point is called an open figure.

Tell us, which of the following figures are open figures?



(i)



(ii)



(iii)



(iv)

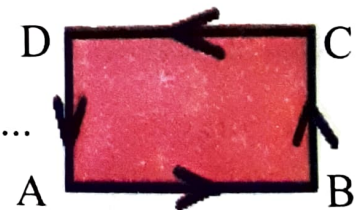


(v)

## Let's see -

We started walking from the point A and passing through points B, C, D we returned to the point A.

Now tell us which type of figure is this, open or closed?...



**We saw -** Such figure which ends at the same point from which it starts, is called a closed figure.

Tell us, which of the following are closed figures?



(i)



(ii)



(iii)



(iv)



(v)





## Do it yourself -

Tell us which figure will be formed? Open or closed -

- On drawing a line along the four sides of the match box .....
- On drawing a line around the coin .....
- On drawing outline of the open tongs .....

## Perimeter

Is the path of the figure in the picture open or closed? .....

Which type of figure is this? .....

Golu starts running from the green flag. He took 40 steps to reach from the green flag to the red flag. He ran 30 steps to reach till the yellow flag from the red flag. Similarly, Golu ran 50 steps again to reach the green flag from the yellow flag. Total how many steps did Golu run?



$$40 \text{ steps} + 30 \text{ steps} + 50 \text{ steps} = 120 \text{ steps}$$

These 120 steps is the perimeter of the triangular figure shown in the picture.

**Let's measure it by the measuring tape -**

The length of the path from the green flag to the red flag = 20 metres

The length of the path from the red flag to the yellow flag = 15 metres

The length of the path from the yellow flag to the green flag = 25 metres

$$\text{Total length of the path} = 20 + 15 + 25 = 60 \text{ metres}$$

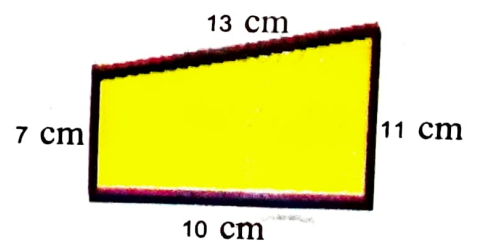
**We saw-** The perimeter of the triangular figure = 60 metres

Let's find out the perimeter of the given figure -

Sum of the length of the four sides of the quadrilateral in the picture = 10 cm + 11 cm + 13 cm + 7 cm

$$= 41 \text{ cm}$$

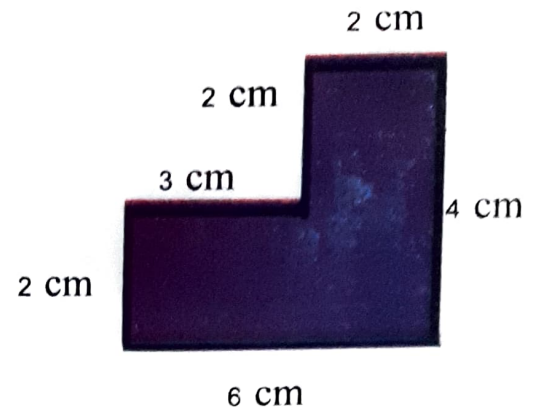
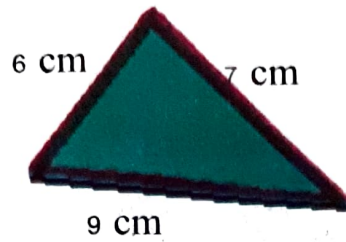
Therefore, the perimeter of the quadrilateral is 41 cm.





## Do it yourself -

Find out the perimeter of the given figures-



## Activity -

## Let's do and learn -

**Teacher** - Rahul, put the book on the blackboard and draw a line along the four sides of the book.

(Rahul drew a figure ABCD)

**Teacher** - Meena, which type of figure is this?

**Meena** - This is a rectangular figure.

**Teacher** - Measure the length of its sides and tell.

**Meena** - Its side is AB = 16 cm, side AD = 10 cm  
side CD = 16 cm and side BC = 10 cm.

**Teacher** - Why is it so?

**Meena** - Because the opposite sides of a rectangle are equal in length.

**Teacher** - Very good!

Let's find out the perimeter of this rectangle by adding the length of all its four sides.

$$\begin{aligned}\text{Perimeter of the rectangle} &= 16 \text{ cm} + 10 \text{ cm} + 16 \text{ cm} + 10 \text{ cm} \\ &= 52 \text{ cm}\end{aligned}$$



**Teacher -**

We saw that- perimeter of a rectangle = sum of lengths of all the four sides of rectangle

$$= \text{length} + \text{breadth} + \text{length} + \text{breadth}$$

$$= 2 \times \text{length} + 2 \times \text{breadth}$$

$$= 2 \times (\text{length} + \text{breadth})$$

$$= \text{Double of the sum of the length and breadth}$$

Hence, perimeter of a rectangle =  $2 \times (\text{length} + \text{breadth})$

**Activity -**

Teacher drew a square figure A B C D on the blackboard.

**Teacher** - Madan, which type of figure is this?

**Madan** - This is a square shaped figure.



**Teacher** - Rashmi, measure the length of one side of this square and tell.

**Rashmi** - The length of its one side is 10 cm.

**Teacher** - Meena, what will be the measurements of the other sides of this square?

**Meena** - The measurements of all the sides will be 10 cm each.

**Teacher** - Why is it so?

**Meena** - Because the length of all the sides of a square are equal.

**Teacher** - Well done!

Let's find out the perimeter of this square by adding the lengths of its sides.

$$\text{Perimeter of the square} = 10 \text{ cm} + 10 \text{ cm} + 10 \text{ cm} + 10 \text{ cm}$$

$$= 40 \text{ cm}$$

$$\text{So, the perimeter of the square} = 40 \text{ cm}$$

**We saw that -**

Perimeter of a square = sum of the lengths of all the sides of a square  
= side + side + side + side  
= 4 x length of a side

**= four times of a side of a square**

Hence, the perimeter of a square = 4 x length of a side

**Example 1:**

The length of a rectangle is 15 cm and breadth is 10 cm. Find out the perimeter of the rectangle.

**Solution:**

$$\begin{aligned}\text{Perimeter of a rectangle} &= 2 \times (\text{length} + \text{breadth}) \\ &= 2 \times (15 \text{ cm} + 10 \text{ cm}) \\ &= 2 \times 25 \text{ cm} \\ &= 50 \text{ cm}\end{aligned}$$



15 cm

So, the perimeter of the rectangle is 50 cm.

**Example 2:**

A side of a square field is 25 metres. Find the perimeter of the field.

**Solution:**

$$\begin{aligned}\text{Perimeter of the field} &= 4 \times \text{length of a side} \\ &= 4 \times 25 \text{ metres} \\ &= 100 \text{ metres}\end{aligned}$$

So, the perimeter of the field is 100 metres.



25 metres



**Example 3 :** The length of a rectangular field is 80 metres and breadth is 50 metres. How many metres of wire is required to fence the field?

**Solution :**

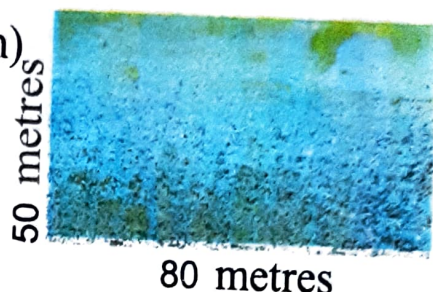
The required length of the wire to fence the field is equal to the perimeter of the field.

So, the perimeter of the field =  $2 \times (\text{length} + \text{breadth})$

$$= 2 \times (80 \text{ metres} + 50 \text{ metres})$$

$$= 2 \times 130 \text{ metres}$$

$$= 260 \text{ metres}$$



So, 260 metres wire will be required to fence the field.

### We have learnt

- To identify the open and closed figures from the given figures.
- To find out the perimeter of different figures like triangle, quadrilateral, square and rectangle.
- The perimeter is the sum of the lengths of the sides of a closed figure.
- Perimeter of a rectangle =  $2 \times (\text{length} + \text{breadth})$
- Perimeter of a square =  $4 \times (\text{length of a side})$



# Exercise

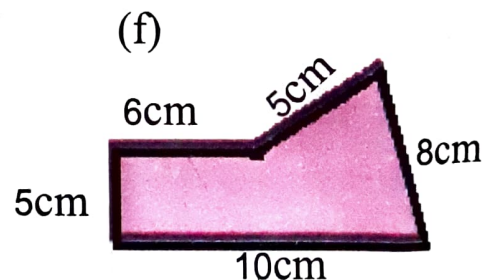
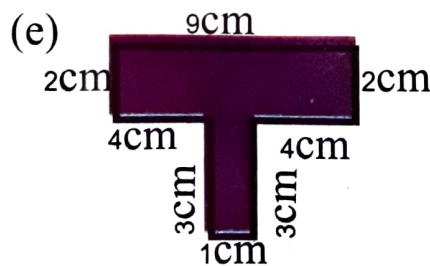
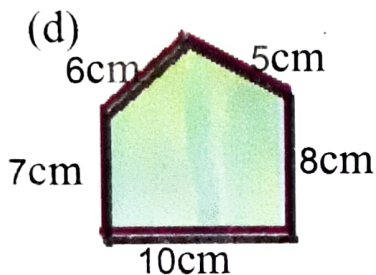
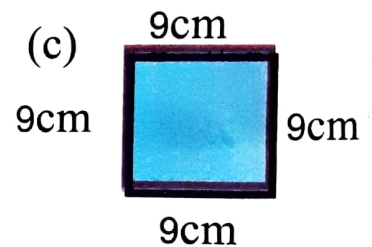
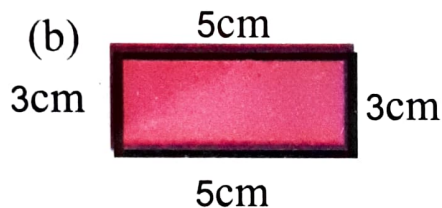
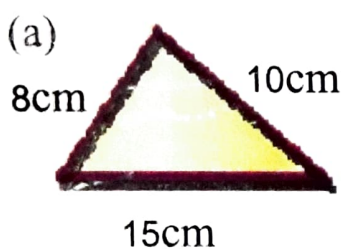
1. Identify the open and closed figures from the figures given below -

Open figures : ..... (i)  (ii) 

Closed figures : ..... (iii)  (iv) 

(v)  (vi) 

2. Find out the perimeter of the following figures -



- The length of a garden is 85 metres and breadth is 56 metres. Find out the perimeter of the garden.
- The length of a side of a square field is 23 metres. Find out the perimeter of the field.
- The lengths of the different sides of a field are 83 metres, 72 metres, 60 metres and 48 metres respectively. Find out the perimeter of the field.
- The perimeter of a square field is 80 cm. Find out the length of the one side of the square.

