

# Chapter - 6

## Measuring Length

- Length - Measurement of distance between two points. [i.e. how long an object is]

Unit - cm, m, km etc.

- Breadth (width) - Distance measured from one side to the other side of an object (i.e. how wide an object is).

Unit - mm, cm, m, km.

- Perimeters - Sum of the boundary of a closed 2-D shape (i.e. distance around a shape).

Unit - cm, m, km etc.

- Area - Measurement of the space inside the boundary of a shape.

Unit -  $\text{mm}^2/\text{sq. mm}$ ,  $\text{cm}^2/\text{sq. cm}$ ,  $\text{m}^2/\text{sq. m}$  etc.

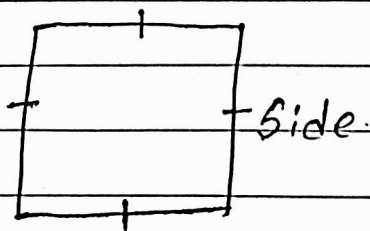
1 cm = 10 mm.

1 m = 100 cm.

1 km = 1000 m.

- Formula of Area and Perimeters :-

1) Square -



$$P = 4 \times \text{Side.}$$

$$A = \text{Side} \times \text{Side.}$$

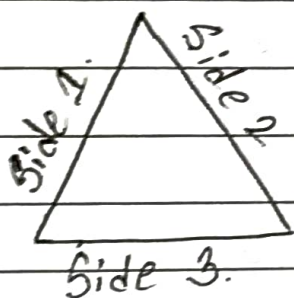
2) Rectangle :-



$$P = 2 \times (l + b)$$

$$A = l \times b$$

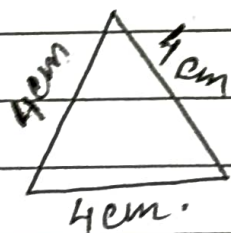
3) Triangle :-



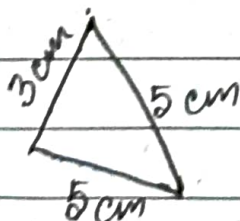
$$P = \text{Side 1} + \text{Side 2} + \text{Side 3}$$

Types of Triangle -

1) Equilateral Triangle - All the sides are equal in length.

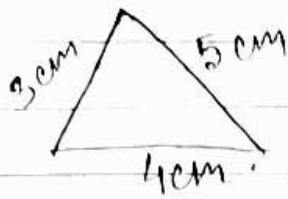


2) Isosceles Triangle - Length of any two sides are equal.

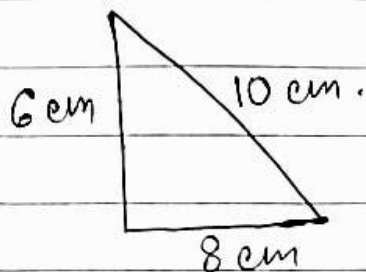




3) Scalene Triangle - Length of all three sides are different.



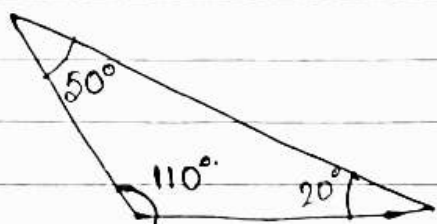
4) Right angle Triangle :- A Triangle whose one of the angle is  $90^\circ$ .



5) Acute angle Triangle - A triangle where all three angles are less than  $90^\circ$ .



6) Obtuse angle triangle - A triangle with exactly one angle greater than  $90^\circ$  and two acute angles.



## Recap Worksheet

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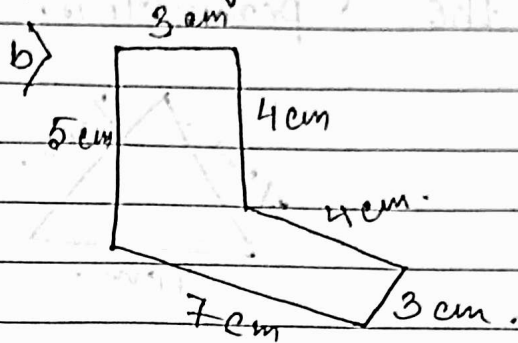
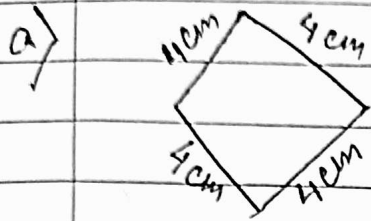
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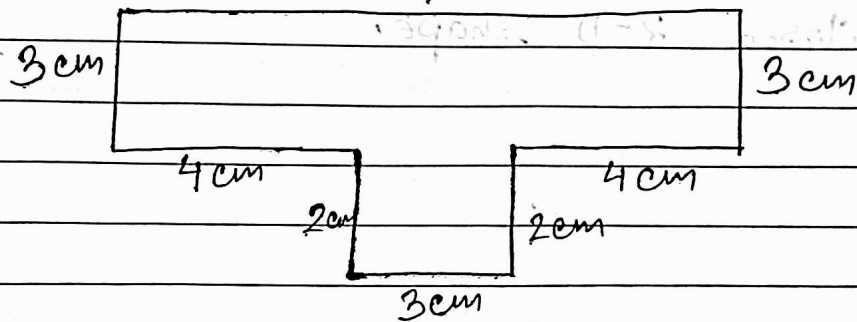
- 1) Convert 5 cm 25 cm into cm.
- 2) How many meters is equivalent to 5 km 82 m.
- 3) Ayesha swam 2077 m in a river. Convert this distance into km and m.
- 4) 32 cm = \_\_\_\_\_ mm.
- 5) Length of Giya's scale is 150 mm. Calculate its length into cm.

# Worksheet

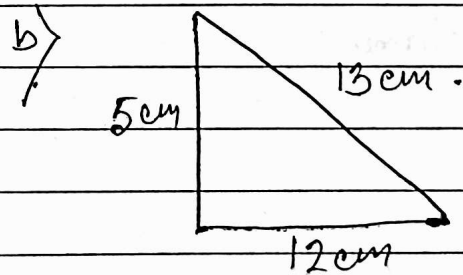
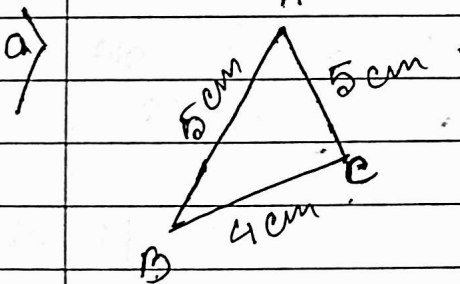
1) Find the perimeter of given figure -



2) Find the missing length when the perimeter is 30cm?



3) Identify the type of triangle and find the perimeter

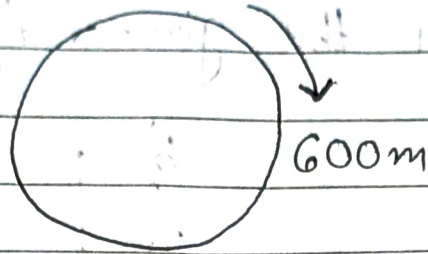


4) Opposite sides of a shape are equal and parallel. Length and breadth of the shape is 10cm and 6cm respectively.

- Draw the shape.
- Name the shape.
- Find the perimeter.

## Case Study

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Govind is training for a 30km marathon around a circular park of boundary 600m.

1) Find 30km = \_\_\_\_\_ m.

2) If Govind runs 15 rounds of the field, how many kms will he cover? [for distance = multiply]

→ Distance Covered in 15 rounds =  $15 \times 600\text{m}$   
 $= 9000\text{m}$   
 $= 9\text{km}$ .

3) How many rounds of the Park. Govind has to run to complete 30 km? [for rounds = divide]

→ No. of rounds Govind has to run to complete.  
 $30\text{ km} = 30000 \div 600 = 50\text{ rounds}$ .

4) If distance between one place to another along centre of the park is 190m, find half of its distance.

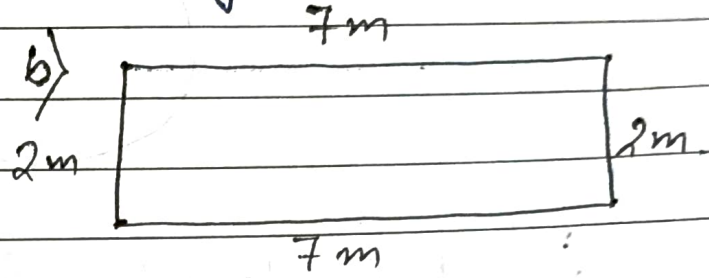
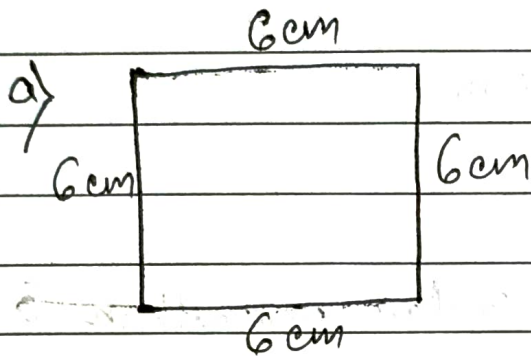
## Worksheet

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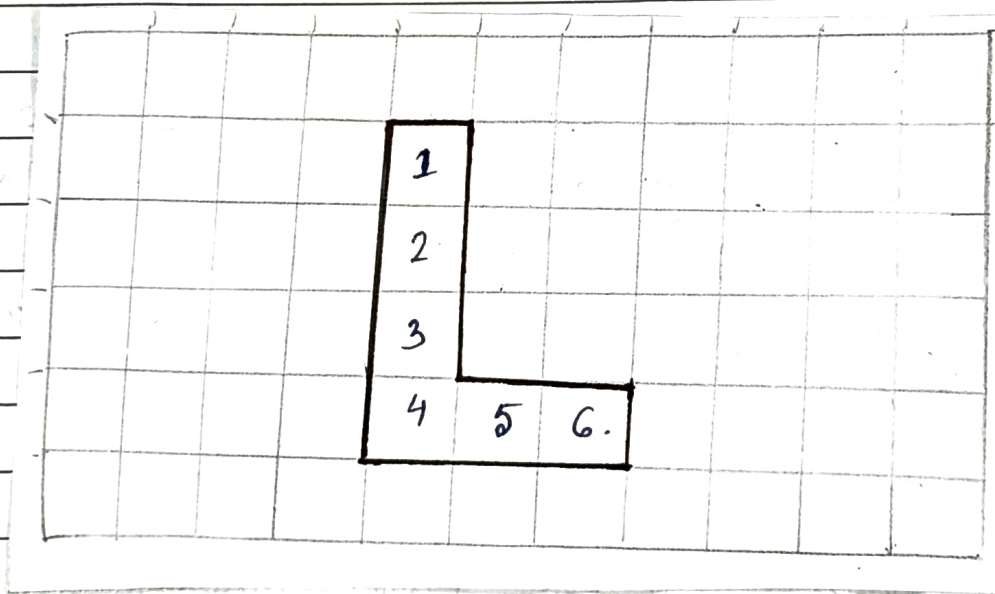
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1) Find the area of the given figure :-



2) Area using boxes :- Area of each small box is  $1 \text{ cm}^2$ .

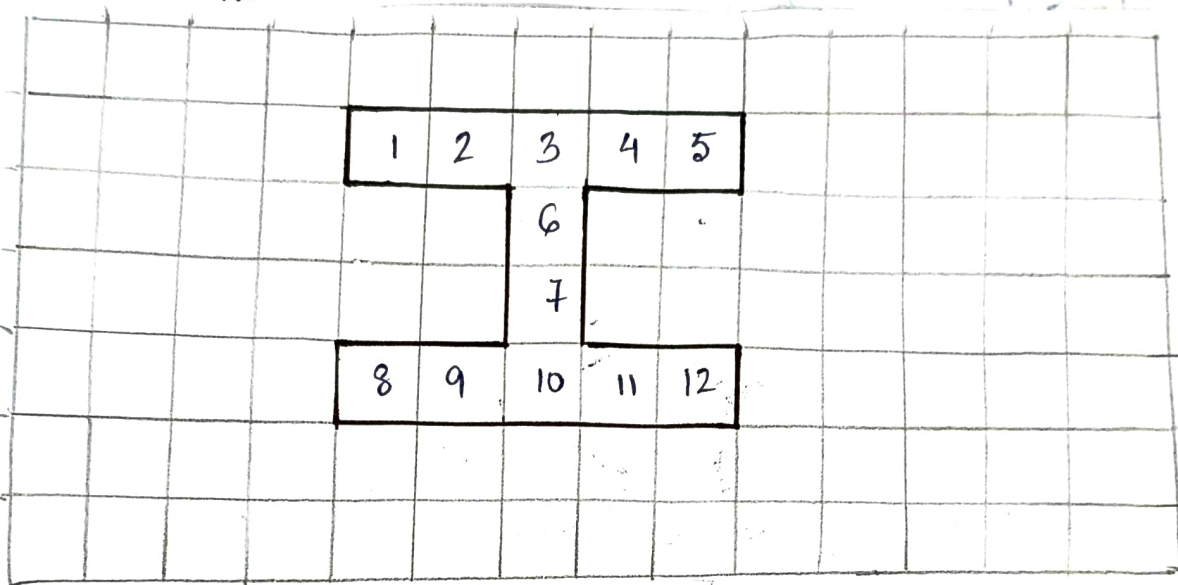


No. of boxes in figure = 6.

Area of each box =  $1 \text{ cm}^2$ .

$\therefore$  Area of this figure =  $6 \times 1 \text{ cm}^2 = 6 \text{ cm}^2$ .

3) Area using boxes :- Area of each small box is  $2\text{cm}^2$ .



No. of boxes in figure = 12.

Area of each box =  $2\text{cm}^2$ .

$\therefore$  Area of this figure =  $12 \times 2\text{cm}^2 = 24\text{cm}^2$ .

# Worksheet:

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- 1) A ribbon is 250 cm long. It is equal to -  
a) 2m 5cm      b) 20m 5cm      c) 250m.
- 2) Which among these is the smallest unit of length?  
a) m      b) cm      c) mm.
- 3) Which of the following is correctly matched?  
a) Road - cm  
b) Length of a book - km.  
c) Nib of a pen - mm.
- 4) An angle of this triangle is  $90^\circ$ . Identify the triangle.  
a) Acute angle triangle.  
b) Right angle triangle.  
c) Obtuse angle triangle.
- 5) Which of the following is used to calculate the Perimeter of a rectangle?  
a) Side  $\times$  Side      b)  $2 \times (\text{length} + \text{breadth})$       c) length  $\times$  breadth.
- 6) Length of Jyoti's maths copy is 15cm. All its sides are same in length. Calculate the area of the copy.  
a)  $30\text{cm}^2$       b)  $225\text{cm}^2$       c) 225 cm.