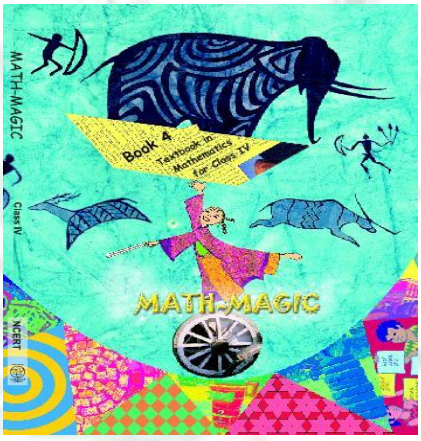
पु॰ना International School
Shree Swaminarayan Gurukul, Zundal

Class -IV

MATH-MAGIC

Study material

Month - December



Ch-13

Field and Fences

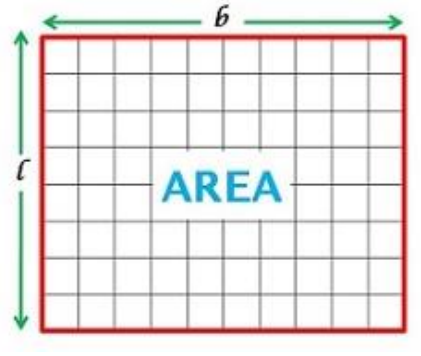
❖ Key points to remember:

- Introduction
- Area
  Find the area of square
  Find the area of rectangle
- Perimeter
  Perimeter of a Square
  Perimeter of a Rectangle
- Word Problem

❖ Introduction

◆ Area

Area is the region enclosed between the boundaries of a figure.



(2 Dimensional shapes).

Area is measured in "**square**" units.

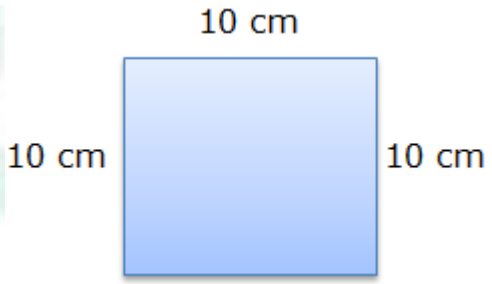
Area of square = Side x Side

Area of Rectangle = Length x Breadth

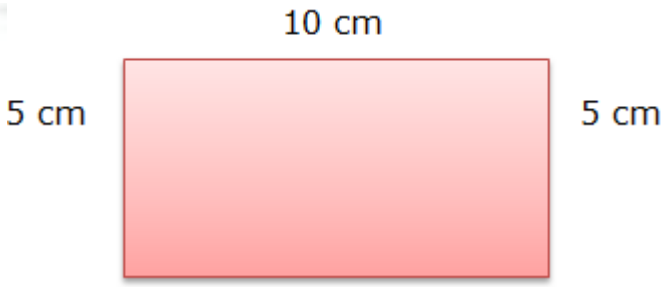
◆ Perimeter

The length of the boundary surrounded a shape is called perimeter.

Perimeter of a square = 4 x Side



Perimeter of Rectangle =2 (L + B)



- **Find the area:**

1) Side = 10 m

Solve –

Area of square = Side x Side

= 10 m x 10 m

= 100 sq. m

2) Side = 15 cm

Solve -

Area of square = Side x Side

= 15 cm x 15 cm

= 225 sq. cm

3) Side = 16 m

Solve -

Area of square = Side x Side

= 16 m x 16 m

= 256 sq. m

4) Side = 50 m

Solve -

Area of square = Side x Side

= 50 m x 50 m

= 2500 sq. m

5) Length = 12 cm, Breadth = 6 cm

Solve –

Area of rectangle = Length × Breadth (l × b)

= 12 cm x 6 cm

= 72 sq.cm

6) Length = 20 cm, Breadth = 11 cm

Solve –

Area of rectangle = l × b

= 20 cm x 11 cm

= 220 sq.cm

7) Breadth = 13 m, Length = 18 m

Solve –

Area of rectangle = l × b
= 13 m x 18 m
= 234 sq.m

8) Length = 22 m , breadth = 19 m

Solve –

Area of rectangle = l × b
= 22 m x 19 m
= 418 sq.m

❖ **Find the perimeter:**

1) Side = 11cm

Solve -

Perimeter of square = 4× side
= 4 x 11 cm
= 44 cm

2) Side = 26 cm

Solution

Perimeter of a square = 4 × side
= 4 x 26 cm
= 104 cm

3) Side = 55 cm

Solution

Perimeter of a square = 4 × side
= 4 x 55 cm
= 220 cm

4) Length =10cm and Breadth = 5cm

Solve -

Perimeter of rectangle = 2 (L + B)
= 2 (10 + 5)
= 2 × 15
= 30 cm

5) Length = 17m, breadth = 13 m

Solution

Perimeter of rectangle = 2(l + b)

= 2(17m + 13m)

= 2 × 30m

= 60m

6) Length = 15cm , breadth = 5cm

Solution

Perimeter of rectangle = 2(l + b)

= 2(15cm + 5cm)

= 2 × 20cm

= 40cm

7) Length = 22m ,breadth =14m

Solution

Perimeter of rectangle = 2(l + b)

= 2(22m + 14m)

= 2 × 36m

= 72m

- **Word Problem**

1. Find the length of rope required to fence a kitchen garden whose length is 4 m and breadth 2 m.

Solution

Here, Length = 4 m

Breadth = 2 m

(To fence a kitchen garden = we find perimeter)

perimeter of a rectangle = 2(L + B)

= 2(4 m + 2 m)

= 2 × 6 m

= 12 m

2. Find out length wire needed to put a boundary round a square park. One side of the park is 55 m?

Solution

Here, Side of a square park is = 55 m.

Perimeter of a square = 4 × side

= 4 × 55 m

= 220 m

The total 220 m wire is needed to put a boundary.

3. A blanket 4 m long and 2 m broad is to be stitched with red ribbon around the edge. How much ribbon is needed? Find out the total cost of ribbon, if cost of ribbon is Rs 3 per m?

Solution

Here, Length = 4m

Breadth = 2m

Perimeter of rectangle blanket = 2(l + b)

= 2(4m + 2m)

= 2 × 6m

= 12m

Cost of 1m ribbon is = Rs 3

Total cost of 12m ribbon is = 12m × 3

= Rs 36.

4. Find the area of rectangular garden. The garden is 70 m long and 50 m wide.

Solution

Here, Length = 70m

Breadth = 50m

Area of rectangular garden = l × b

= 70m x 50m

= 3500sq.m

5. A square wall is to be painted. Its side is 200 cm. Find the area to be painted.

Solution

Here, side = 200cm

Area of square wall = s × s

= 200cm × 200cm

= 40000sq. cm

CH-14 -Smart Chart - (Activity based)