पुÚना International School

Shree Swaminarayan Gurukul, Zundal

Class -IV

MATH-MAGIC

Sample plan - II

Year- 2022-23

Index

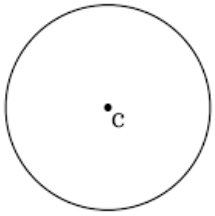
Ch-8

Carts and Wheels

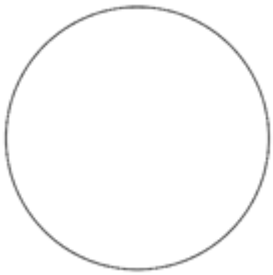
❖Key points to remember:

- Introduction
- Find the missing radius or diameter in the given table
- Fill in the blanks.
- Look at the figure and answer the following questions.
- Using rounder draw a circle of the given radius.

- **Introduction (**https://www.youtube.com/watch?v=6TDsT0enyxs)
  - **Circle: A circle is a round shaped figure that has no corners or edges. A circle is a closed curve.**
  - The fixed point is called the **centre of the circle.**

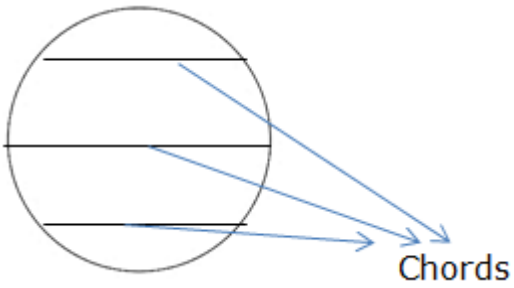


  - **Circumference: The total length of the boundary of the circle is called circumference of the circle.**



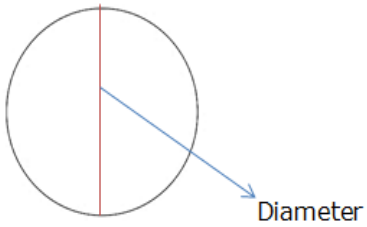
  - **Chord: A chord is a line segment joining any two points on the circle.**

Step: If we fold any part of the circle now. The plat formed is called the chord of the circle.

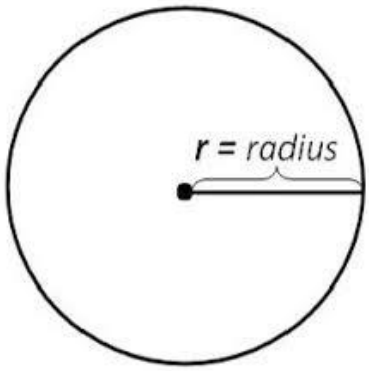


  - **Diameter: The longest chord which pass through the centre is called diameter.**

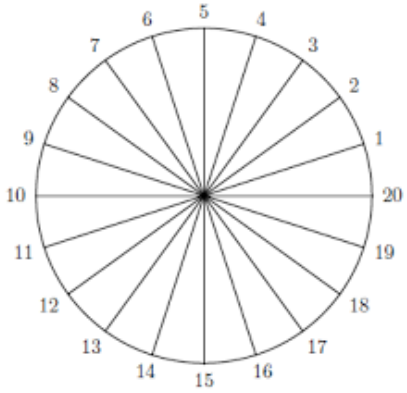
Step: Fold the cut circle into half. We will get semicircle.
Now unfold the semicircle and see the plat formed is called the diameter of circle. All diameter of the given circle is equal in length.



- Radius: **The line segment joining the centre of the circle to any point on the circle is called the radius of the circle.**

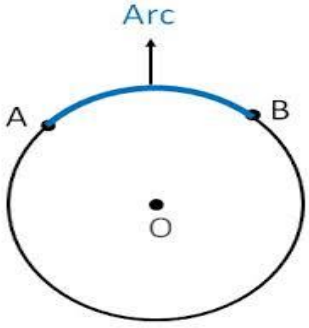


- Radii of a circle are of equal lengths.
- Radii is plural of radius. (example)



- Each diameter is formed of two radii.

- Arc – Any part of the circumference of the circle is called arc.



Formula:

- **Diameter** = 2 x radius
- **Radius** = Diameter/2

Example 1: Radius = 6 cm. Find diameter

Diameter = 2 x 6 cm

= 12 cm

Example 2: Diameter = 18 cm. Find radius

Radius = 18/2 (division)

= 9 cm

- Find the missing radius or diameter in the given table.

Sr. no	Radius	Diameter
1	4 cm	**2 x 4 cm = 8 cm**
2	$\frac{12\ cm}{2}$ **= 6 cm**	12 cm
3	3 cm	**2 x 3 cm = 6 cm**
4	$\frac{16\ cm}{2}$ **= 8 cm**	16 cm
5	5 cm	**2 x 5 cm = 10 cm**
6	$\frac{4\ cm}{2}$ **= 2 cm**	4 cm

- **Fill in the blanks.**

a Diameter is the longest chord of the circle.

b A circle is a simple closed curve shape.

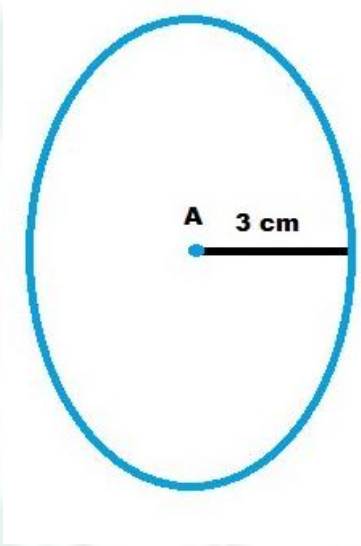
c Diameter divides the circle into two equal halves.

d The length of the boundary of a circle is called circumference of a circle.

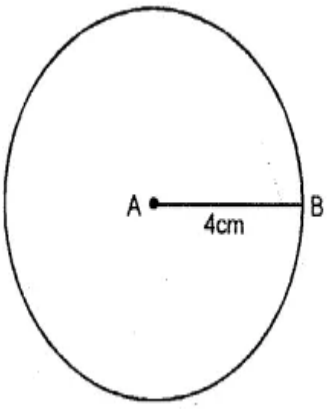
e Line segment joining any two points on the edge of the circle is called chord.

- **Using rounder draw a circle of the given radius.**(https://www.youtube.com/watch?v=BfR-mphcTvE)

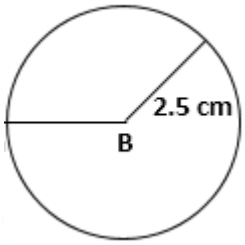
a) 3cm



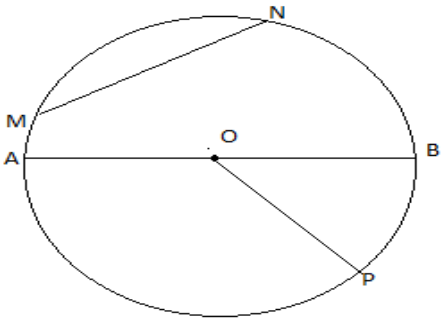
b) 4 cm



c) 2.5 cm



- **Look at the figure and answer the following questions.**

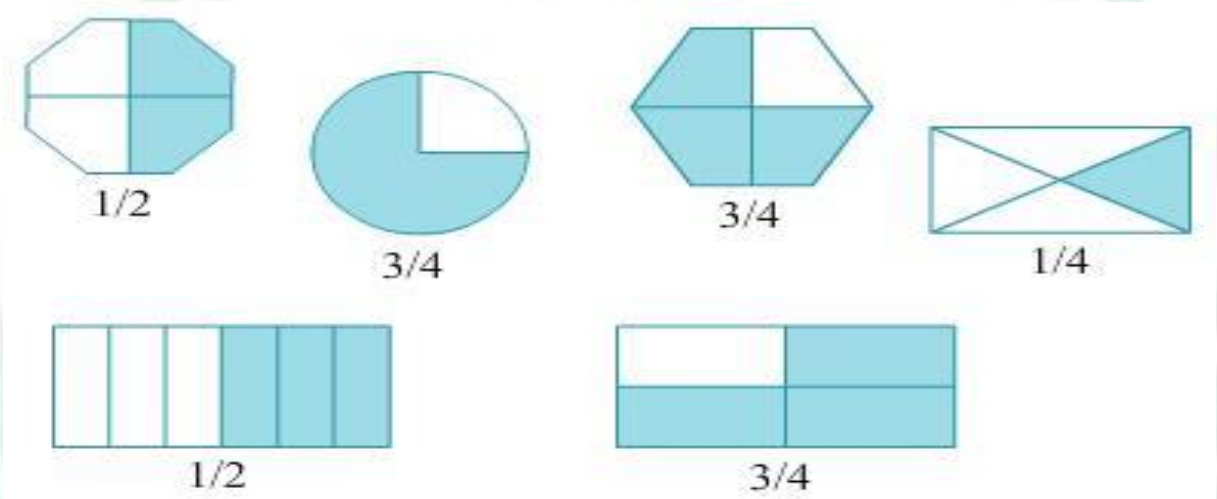


1) Center of the circle – **O**
2) Chord of the circle – **MN, AB**
3) Radii of the circle – **OB, OP, OA**
4) Diameter of the circle - **AB**

Activity

- Make any design using only rounder or compass. For eg

CH- 9
Halves and Quarter



❖Key points to remember:

- Introduction of fraction
- Fill in the blanks.
- Equivalent Fractions

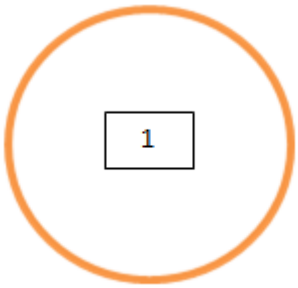
Ways to find whether fractions are equivalent or not: -
Ways to build equivalent fractions:-

- Addition of Like Fractions
- Subtraction of Like Fractions
- Word problem.
- Activity.

- # Introduction of fraction

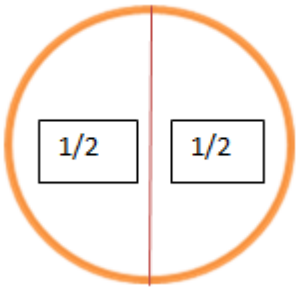
Fraction: A fraction is a small part or proportion of something.

Whole



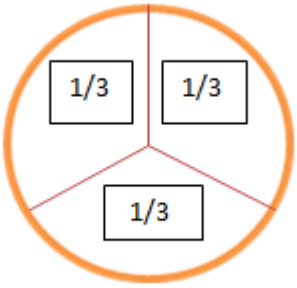
It is 1 whole

Half



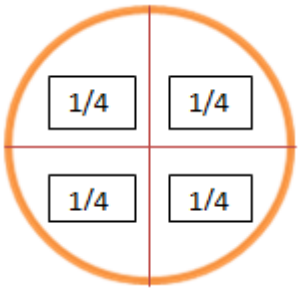
Here we have divided a whole into two equal parts, each is part is called half or ½

One-third



Here we have divided a whole into three equal parts; each part is called One-third or 1/3.

One-fourth or Quarter



Here we have divided a whole into four equal parts; each part is called One-fourth or ¼.

How to read and write fractions?

Here, a big rectangle is divided into 5 equal parts. Out of 5 parts only 2 parts is shaded in green.

So, fraction for shaded part is 2/5
It can be read as 2 by 5 or 2 upon 5

$\frac{2}{5}$ ⟶ Numerator (represents parts we are taking about, out of total)
$\frac{2}{5}$ ⟶ Denominator (represents total parts into which whole is divided)

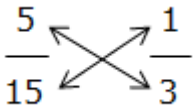
- **Fill in the blanks**.
  1) A fraction is a small part of something.
  2) Number written above the line in a fraction is called numerator.
  3) Number written below the line in a fraction is called denominator.
  4) In $\frac{2}{5}$, 2 is the numerator and 5 is the denominator.
  5) In $\frac{3}{8}$, 3 is the numerator and 8 is the denominator.
  6) In $\frac{6}{9}$, _____is the numerator and ____ is the denominator.
  7) In $\frac{7}{8}$, _____is the numerator and ____ is the denominator.
  8) In $\frac{8}{9}$, _____is the numerator and ____ is the denominator.

- **Equivalent Fractions**

  Equivalent fractions are the fraction that look different but have same value.

A. Ways to find whether fractions are equivalent or not: -

Example:



5 x 3 = 15

1 x 15 = 15

The two products are equal. So, 5/15 and 1/3 are equivalent fraction.

1) $\frac{3}{5}$ and $\frac{9}{15}$

Answer:

3 × 15 = 45

5 × 9 = 45

Yes it is an equivalent fraction.

2) $\frac{1}{2}$ and $\frac{4}{5}$

Answer:

1 × 5 = 5

2 × 4 = 8

No, it is not an equivalent fraction.

3) $\frac{5}{6}$ and $\frac{20}{24}$

Answer:

5 × 24 = 120

$20 \times 6 = 120$

Yes it is an equivalent fraction.

4) $\frac{6}{9}$ and $\frac{7}{9}$

Answer:

$6 \times 9 = 45$

$7 \times 9 = 63$

No, it is not an equivalent fraction.

5) $\frac{2}{3}$ and $\frac{14}{21}$

Answer:

$21 \times 2 = 42$

$14 \times 3 = 42$

Yes it is an equivalent fraction.

B. Ways to build equivalent fractions: -

Multiply numerator and denominator of the given fraction by common number but not by zero.

Example: $\frac{4}{5}$

$$\frac{4 \times 2}{5 \times 2} = \frac{8}{10} \quad ; \quad \frac{4 \times 3}{5 \times 3} = \frac{12}{15}$$

a) $\frac{1}{3}$

Answer:

$\frac{1 \times 2}{3 \times 2} = \frac{2}{6}$

$= \frac{2}{6}, \frac{3}{9}, \frac{4}{12}$

b) $\frac{2}{5}$

Answer:

$= \frac{4}{10}, \quad \frac{6}{15}, \quad \frac{8}{20}$

c) $\frac{1}{2}$

Answer:

$= \frac{2}{4}, \quad \frac{3}{6}, \quad \frac{4}{8}$

d) $\frac{25}{17}$

Answer:

$= \frac{50}{34}, \quad \frac{75}{51}, \quad \frac{100}{68}$

e) $\frac{3}{4}$

- **Addition of like fractions**

Steps to add like fractions

Step 1: Add the numerators of the fractions given and write over the common denominator.

$$\text{Sum} = \frac{\text{Sum of numerators}}{\text{Common denominators}}$$

Step 2: Write the answer in the simplest form. If answer is in improper fraction, convert it into mixed fraction.

Question: 1

$$\frac{2}{5} + \frac{1}{5}$$

$$= \frac{2+1}{5} = \frac{3}{5}$$

Question: 2

$$\frac{2}{6} + \frac{1}{6}$$

$$= \frac{2+1}{6}$$

$$= \frac{3}{6}$$

$$= \frac{\cancel{3} \times 1}{\cancel{3} \times 2} \text{ (Simplest form)}$$

$$= \frac{1}{2}$$

Question: 3

$$\frac{6}{5} + \frac{7}{5}$$

$$= \frac{6+7}{5}$$

$$= \frac{13}{5}$$

$$= 2\frac{3}{5}$$

Question:

4) $\frac{1}{12} + \frac{5}{12}$

5) $\frac{7}{11} + \frac{2}{11}$

- **Subtraction of Like Fractions**

Steps to subtract like fractions

Step 1: Subtract the numerators of the fractions given and write over the common denominator.

$$\text{Difference} = \frac{\text{Difference of numerators}}{\text{Common denominators}}$$

Step 2: Write the answer in the simplest form. If answer is in improper fraction, convert it into mixed fraction.

Question: 1

$$\frac{2}{5} - \frac{1}{5}$$

$$= \frac{2-1}{5}$$

$$= \frac{1}{5}$$

Question: 2

$$\frac{3}{6} - \frac{1}{6}$$

$$= \frac{3-1}{6}$$

$$= \frac{2}{6}$$

$$= \frac{\cancel{2} \times 1}{\cancel{2} \times 3}$$

$$= \frac{1}{3}$$

Question

3) $\frac{10}{8} - \frac{4}{8}$

$$= \frac{10-4}{8}$$

$$= \frac{6}{8}$$

$$= \frac{\cancel{2} \times 3}{\cancel{2} \times 4}$$

$$= \frac{3}{4}$$

4) $\frac{11}{2} - \frac{5}{2}$

5) $\frac{12}{7} - \frac{11}{7}$

- Word problem:

1) There are 60 blocks and $\frac{3}{4}$ green in colour. How many blocks are not green?

   Ans:-

   Total blocks = 60

   ¾ of them are green = $60 \times \frac{3}{4}$

   $= 15 \times 3$

   = 45 blocks are green

   Blocks are not green (60 – 45) = 15

2) Anita counted 12 students in the choir. Three quarters of the students have brown hair. How many students in the choir have brown hair?

   Ans:

   Total students = 12

   Three quarter of (3/4)

   Them have brown hair = $12 \times \frac{3}{4}$

   $= 3 \times 3$

   = 9 students have brown.

❖ Activity

Make a fraction flowers with help of paper plates and colour papers

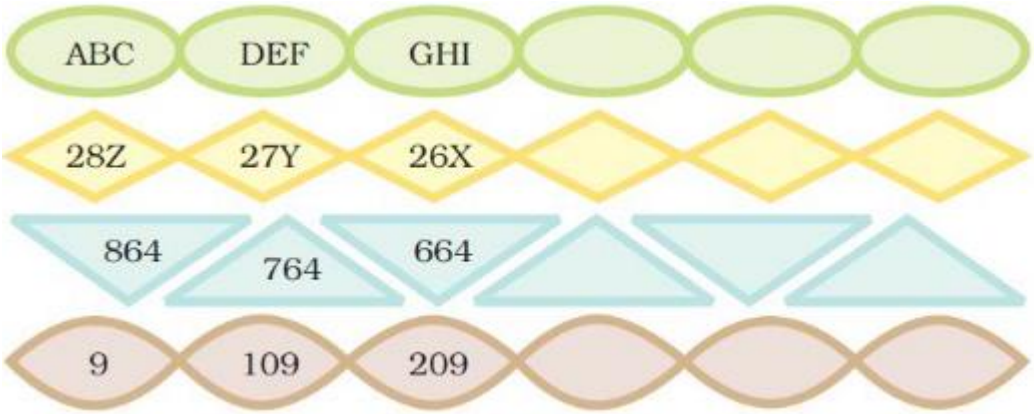
Ch-10

Play with patterns

❖ Key points to remember:

- Complete the patterns.
- Now you fill these stars.
- Using the same rule, complete these number towers.
- Code messages
- Activity.

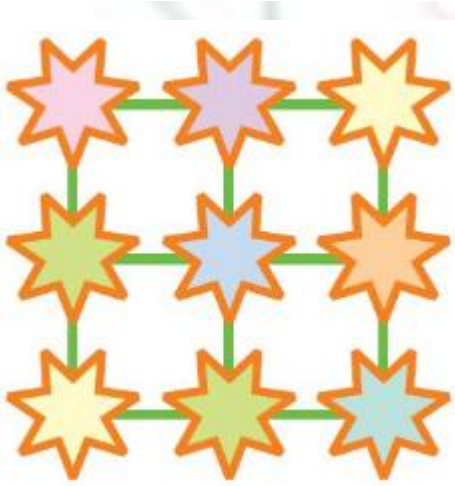
- **Complete the patterns.**



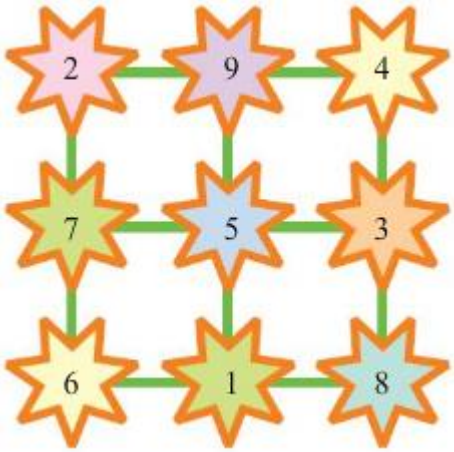
Answer:

- **Now you fill these stars.**

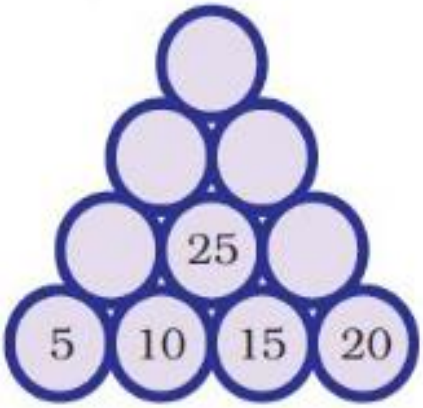
  Rule - Use numbers 1 – 9 and that the numbers on each line add up to 15 and no number should be repeat.

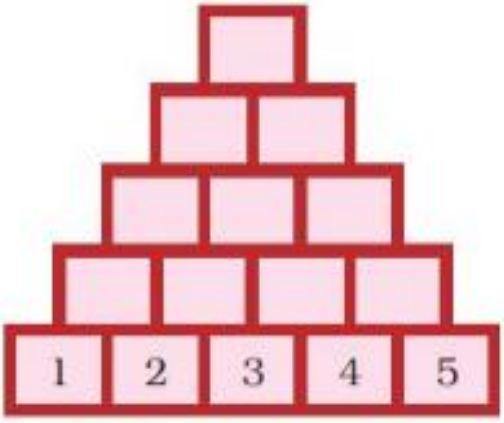


Solution

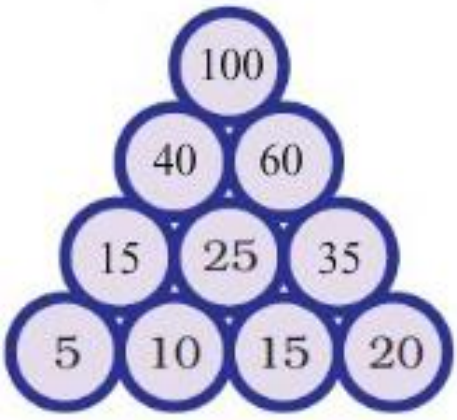


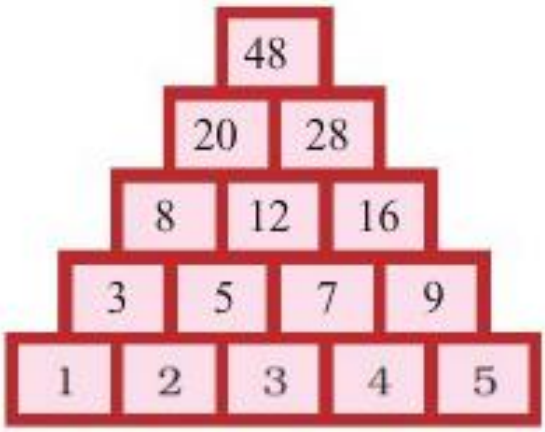
- **Using the same rule, complete these number towers.**





Answer:





- **Code messages**

1) Teenu wants to write to his friend ‘Good Morning’.

Answer:

G = 7; O = 15; O = 15; D = 4

M = 13; O = 15; R = 18, N = 14, I = 9, N = 14; G = 7

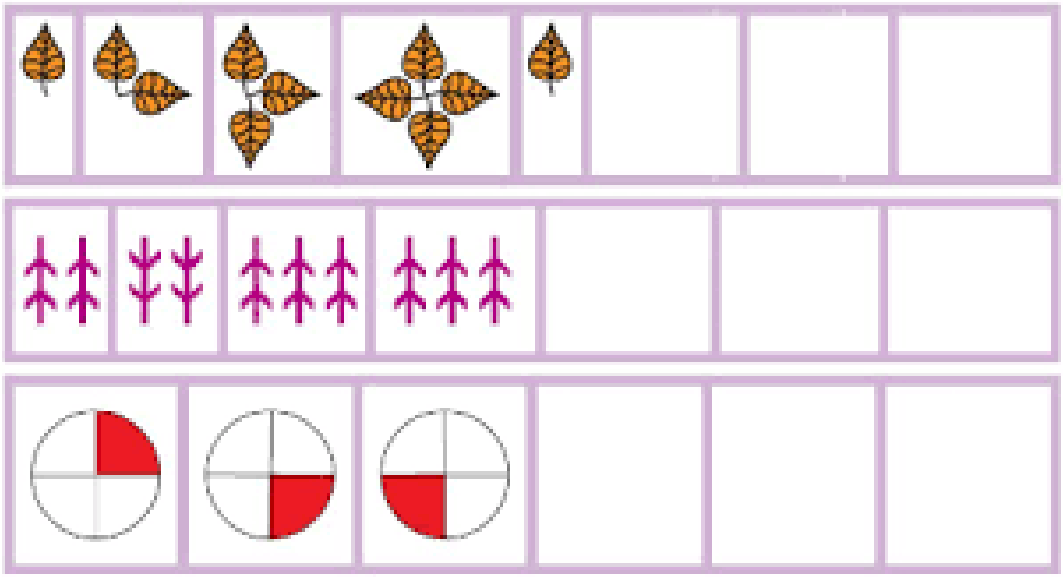
Thus, ‘Good Morning’ is written as

2) Have a nice day-

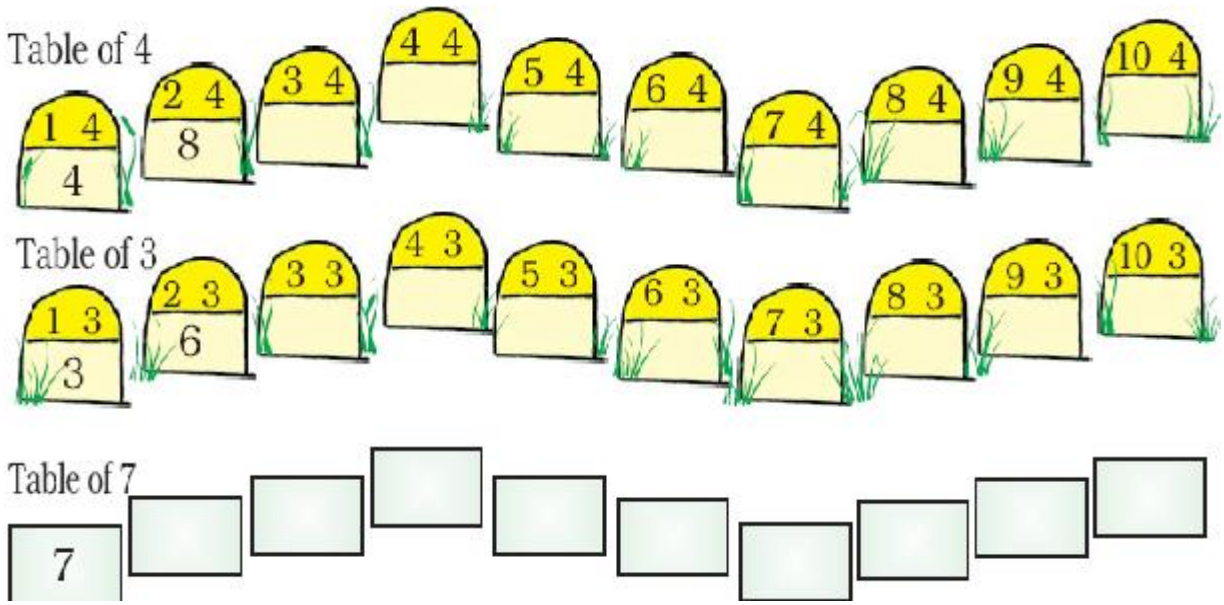
3) I love India-

4) Good night-

- Activity:



CH-11
Tables and shares



❖Key points to remember:

- Multiplication
- Division
- Word problems.

- **Multiplication sums:**

1) 12 × 8

$$\begin{array}{r} {\scriptstyle (1)} \\ 12 \\ \times\ 8 \\ \hline 96 \end{array}$$

2) 145 × 9

$$\begin{array}{r} {\scriptstyle 4\ 4} \\ 145 \\ \times\ 9 \\ \hline 1305 \end{array}$$

3) 25 × 16

$$\begin{array}{r} {\scriptstyle 3} \\ 25 \\ \times 16 \\ \hline 150 \\ +\ 250 \\ \hline 400 \end{array}$$

4) 78 × 69

$$\begin{array}{r} {\scriptstyle 4} \\ 78 \\ \times 69 \\ \hline 702 \\ +\ 4680 \\ \hline 5382 \end{array}$$

5) 127 × 34

$$\begin{array}{r} {\scriptstyle 1} \\ {\scriptstyle 1\ 2} \\ 127 \\ \times\ 34 \\ \hline 508 \\ +\ 3810 \\ \hline 4318 \end{array}$$

6) 473 × 85

$$\begin{array}{r} {\scriptstyle 5\ 2} \\ {\scriptstyle 3\ 1} \\ \hline 4\ 7\ 3 \\ \times\ 8\ 5 \\ \hline 2\ 3\ 6\ 5 \\ +3\ 7\ 8\ 4\ 0 \\ \hline 4\ 0\ 2\ 0\ 5 \end{array}$$

- **Division**

The division is a method of distributing a group of things into equal parts. It is one of the four basic operations of arithmetic, which gives a fair result of sharing.

Division sums:

1) 28 ÷ 2

$$\begin{array}{r} 1\ 4 \\ 2\overline{)\ 2\ 8} \\ -2 \\ \hline 0\ 8 \\ -8 \\ \hline 0\ 0 \end{array}$$

2) 66 ÷ 6

$$\begin{array}{r} 1\ 1 \\ 6\overline{)\ 6\ 6} \\ -6 \\ \hline 0\ 6 \\ -\ 6 \\ \hline 0\ 0 \end{array}$$

3) 96 ÷ 8

$$\begin{array}{r} 1\ 2 \\ 8\overline{)\ 9\ 6} \\ -8 \\ \hline 1\ 6 \\ -1\ 6 \\ \hline 0\ 0 \end{array}$$

4) 323 ÷ 19

```
    17
19)323
 -19
  133
 -133
   000
```

5) 600 ÷ 24

```
    25
24)600
  -48
  120
 -120
    00 0
```

6) 110 ÷ 10

```
    11
10)110
  -10
   10
  -10
    0 0
```

- **Word problem:**

1) There are 18 packets of Rakhis. Each packet has 6 Rakhis in it. How many total Rakhis are altogether?

Answer: -

No. of packets of rakhis = 18

No. of rakhis in one packet = 6

Total rakhis in all = 18 × 6

= 108

Total 108 rakhis are altogether in boxes.

2) There are 10 packets of sugar. Saurabh paid 11 rupees for one packet. How much money need to pay for 10 packets of Sugar?

Answer: -

No. of packets of sugar = 10
Cost of one packet = Rs 11

Total cost of 10 packets of sugar = 10 × 11

= Rs 110

Total 110 rupees need to pay for 10 packets of Sugar.

3) Leela has not gone to school for 21 days. For how many weeks was she away from school?

Answer:

Number of days in one week = 7

Leela has not gone to school for 21 days.

Number of weeks in 21 days = 21 ÷ 7

$$\begin{array}{r} 3 \\ 7\overline{)\,21} \\ -21 \\ \hline 00 \end{array}$$

Thus, Leela was away from school for 3 weeks.

4) Kajal made a necklace of 25 sea-shells. How many such necklaces can be made using 100 sea-shells?

Solution

No. of sea - shells in one necklace = 25

No. of sea – shells Kajal has = 100

Total no. of necklaces = 100 ÷ 25

$$\begin{array}{r} 4 \\ 25\overline{)\,100} \\ -100 \\ \hline 000 \end{array}$$

Kajal can make total 4 necklaces.

5) One carton can hold 85 soap bars. Dhruvi wants to pack 255 soap bars. How many cartons does she need for packing all of them?

Solution

No. of soap bars in one carton = 85

No. of soap bars Dhruvi has = 255

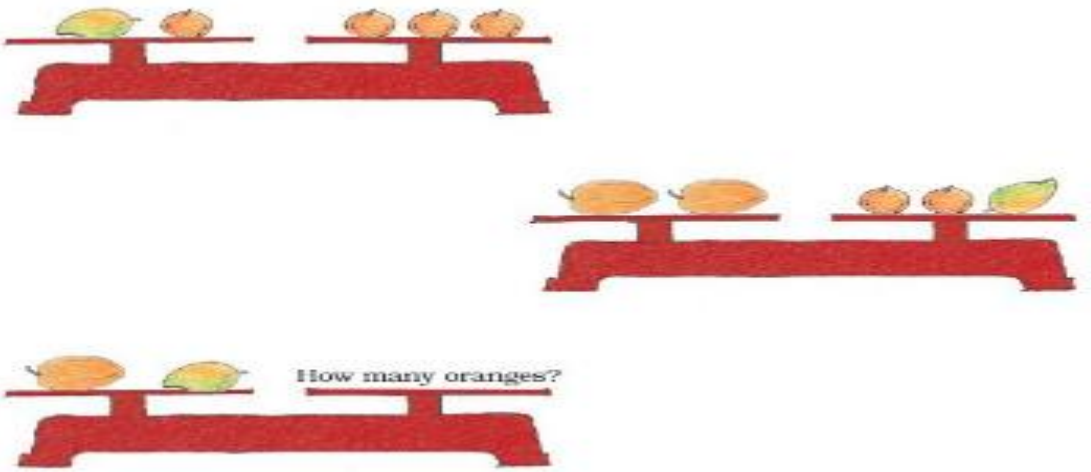
Total no. of cartons = 255 ÷ 85

$$
\begin{array}{r}
3 \\
85\overline{)255} \\
-\,255 \\
\hline
000
\end{array}
$$

Dhruvi need 3 cartons to pack soap bars.

Ch-12

How heavy and How light?



❖ Key points to remember:

- Measuring Mass (weight)
- Conversion of kilogram into gram
- Which is a better unit to measure the weight of the following objects?
- Addition
- Subtraction
- Word Problems

- **Measuring Mass (weight)**
  - Mass is a measure of how heavy something is.
  - We use a balance scales or a weighing scales to measure mass (or weight)
  - Mass is measured in grams (g) and kilograms (kg).
  - We use grams to weigh lighter objects and kilograms to weigh heavier objects.

    1 kg = 1000g

    Or

    1000g = 1kg
  - The standard unit of measurement of mass is Kilogram.

- **Convert Kilogram into gram.**

  Note: In conversion of unit,when we go from higher unit to lower unit; such as from kg to g. we always multiply.

  1 Kg = 1000 g

  a) 4 kg.

  = 4kg x 1000g

  = 4000g

  b) 2kg = 2kg x 1000

  = 2000g

  c) 3kg = 3kg x 1000

  = 3000g

  d) 1kg 200g = 1kg x 1000 + 200g

  = 1000g +200g

  = 1200g

  e) 33kg 450g = 33kg x 1000 + 450g

  = 33000g + 450g

  = 33450g

  f) 54kg 23g = 54kg x 1000 + 23g

  = 54000g + 23g

  = 54023g

- **Which is a better unit to measure the weight of the following objects?**
  1) Weight of squirrel – **g**
  2) Weight of cell phone – **g**
  3) Weight of muskmelon **– kg**
  4) Weight of a camel – **kg**
  5) Weigh of 1 carrot – **g**
  6) Weight of washing machine **– kg**

- **Addition the following**

  Step1: Add the gram column

  Step2: Add the kg column

  a) 75kg 582g and 13kg 410g

	kg	g
	7 5	5 8 2
+	1 3	4 1 0
	8 8	9 9 2

  b) 94kg 215g and 6kg 757g

	kg	g
	9 4	2 1^{1} 5
+	0 6	7 5 7
	1 0 0	9 7 2

  c) 55kg 540g + 18kg 479g

	kg	g
	1 1	1
	5 5	5 4 0
+	1 8	4 7 9
	7 4	0 1 9

  d) 25kg 595g + 15kg 345g

- **Subtraction of following**

  Step1: Subtract the gram column

  Step2: Subtract the kg column

a) 13kg 410g from 75kg 582g

	kg	g
	7 5	5 8 2
-	1 3	4 1 0
	6 2	1 7 2

b) 78kg 654g – 38kg 806g

	kg	g
	6 17	16 4 14
	~~7~~ ~~8~~	~~6~~ ~~5~~ ~~4~~
-	3 8	8 0 6
	3 9	8 4 8

c) 22kg 500g – 1kg 753g

	kg	g
	1	14 9 10
	2 ~~2~~	~~5~~ ~~0~~ ~~0~~
-	0 1	7 5 3
	2 0	7 4 7

d) 24kg 570g – 12kg 679g

- **Word Problems:**

1) Manu purchased 55kg 300g of a packet of rice and 41kg 200g of a packet of wheat flour. How much is the total weight of both the packets?

Solution:

Weight of rice = 5kg 300g

Weight of wheat flour = 4kg 200g

Total weight of both the packets = 5kg 300g + 4kg 200g

	kg	g
	5	3 0 0
+	4	2 0 0
	9	5 0 0

2) Daksh weighs 39kg 900g. Mani's weight 35kg 600g. Who weighs more and by how much?

Solution:

Daksh's weight = 39kg 900g

Mani's weight = 35kg 600g

Daksh weight is more by = 39kg 900g – 35kg 600g

	kg	g
	39	900
-	35	600
	04	300

3) Rita bought 25 kg 630g of cherries. From that she used 22 kg 700g of cherries. How much cherries left with her?

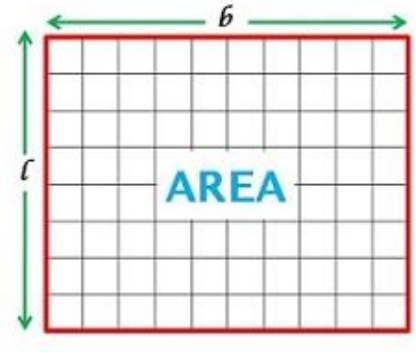
Ch-13
Field and Fences

❖ Key points to remember:

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

- **Area**

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



(2 Dimensional shapes).

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

10 mm = 1cm	1 sq. cm = 100 sq.mm
100 cm = 1m	1 sq. m = 10000 sq.cm
1000m = 1km	1 sq. km = 1000000 sq. m

- **Find the area of square :**

Area of square= Side x Side

(In case of square length and breadth are same)

1) Side of square = 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

- **Find the area of rectangle:**

Area of Rectangle = Length x Breadth

1) Length = 12 cm, Breadth = 6 cm

Solve –

Area of rectangle = Length × Breadth (l × b)
= 12 cm x 6 cm
= 72 sq.cm

2) Length = 20 cm, Breadth = 11 cm

Solve –

Area of rectangle = l × b
= 20 cm x 11 cm
= 220 sq.cm

3) Breadth = 13 m, Length = 18 m

Solve –

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

4) Length = 22 m , breadth = 19 m

Solve –

Area of rectangle = l × b

= 22 m x 19 m
= 418 sq.m

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

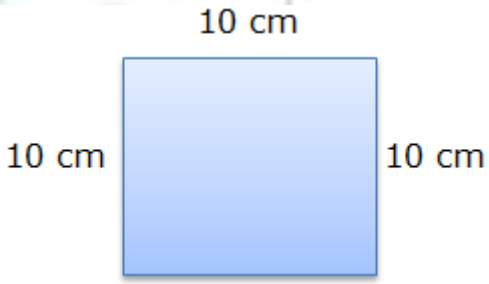
- Find the perimeter of square:

  Perimeter of a square = sum of all sides

  OR

  = 4 x Side

  1) Side of square 10 cm



  Method 1: Perimeter of square = sum of all sides

  = 10 + 10 + 10 + 10

  = 40 cm

  Method 2:

  Perimeter of square = 4× side

  = 4 x 10 cm

  = 40 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

= cm

4) Side = 73 m

- **Perimeter of a Rectangle**

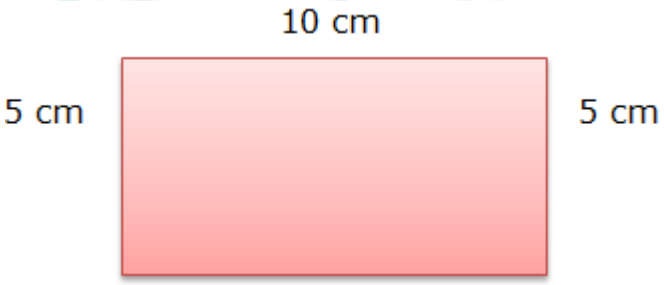
Perimeter of Rectangle = Sum of all side (L + L + B + B)

OR

=2 (L + B)

Example

1) Length =10cm and Breadth = 5cm



Method First: Perimeter of rectangle = sum of all sides

= 10 + 10 + 5 + 5

= 30 cm

Method second: Perimeter of rectangle = 2 (L + B)

= 2 (10 + 5)

= 2 × 15

= 30 cm

2) Length = 6 cm , breadth = 3 cm

Solution

Perimeter of rectangle = 2(l + b)

= 2(6cm + 3 cm)

= 2 × 9 cm

= 18 cm

3) Length = 17m, breadth = 13 m

Solution

Perimeter of rectangle = 2(l + b)

= 2(17m + 13m)

= 2 × 30m
= 60m

4) Length = 15cm , breadth = 5cm

Solution

Perimeter of rectangle = 2(l + b)
= 2(15cm + 5cm)
= 2 × 20cm
= 40cm

5) Length = 22m ,breadth =14m

Solution

Perimeter of rectangle = 2(l + b)
= 2(22m + 14m)
= 2 × 36m
= 72m

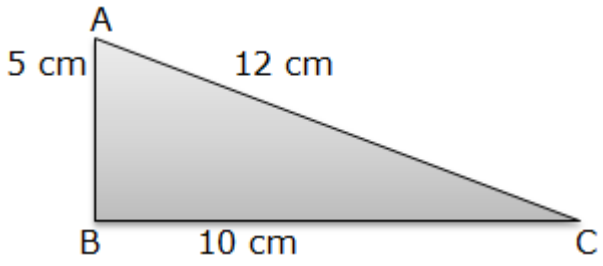
- **Perimeter of a Triangle**

Scalene Triangle - A triangle whose all three sides are of different length is known as scalene triangle.

Isosceles Triangle - A triangle whose two sides are of equal length is known as isosceles triangle.

Equilateral Triangle - A triangle whose all sides are of equal length is known as equilateral triangle.

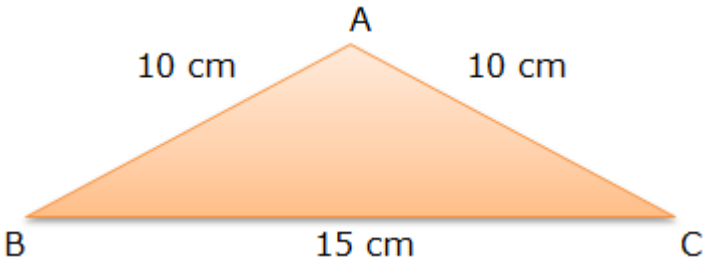
Q 1



Solution

Perimeter of Scalene Triangle = Sum of three sides
= AB + BC + CA
= 5 cm + 10 cm + 12 cm
= 27 cm

Q2



Solution

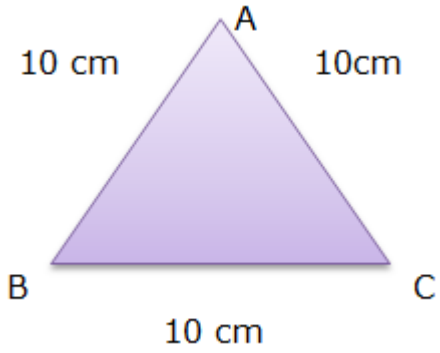
Perimeter of Isosceles Triangle = Sum of three sides

= AB + BC + CA

= 10 cm + 15 cm + 10 cm

= 35 cm

Q3



Solution

Perimeter of Equilateral Triangle = Sum of three sides

= AB + BC + CA

= 10 cm + 10 cm + 10 cm

= 30 cm.

OR

= 3 × length (all 3 sides are equal)

= 3 ×10 cm

= 30 cm.

Q4 AB = 5cm, BC = 6cm, CA = 8cm

Solution

Perimeter of Scalene Triangle = Sum of three sides

= AB + BC + CA

= 5 cm + 6 cm + 8 cm

= 19 cm

Q5 AB = 7 m, BC = 7 m, CA = 7 m

Solution

Perimeter of Equilateral Triangle = 3 x length

= 3 ×7 m

= 21 m

- **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

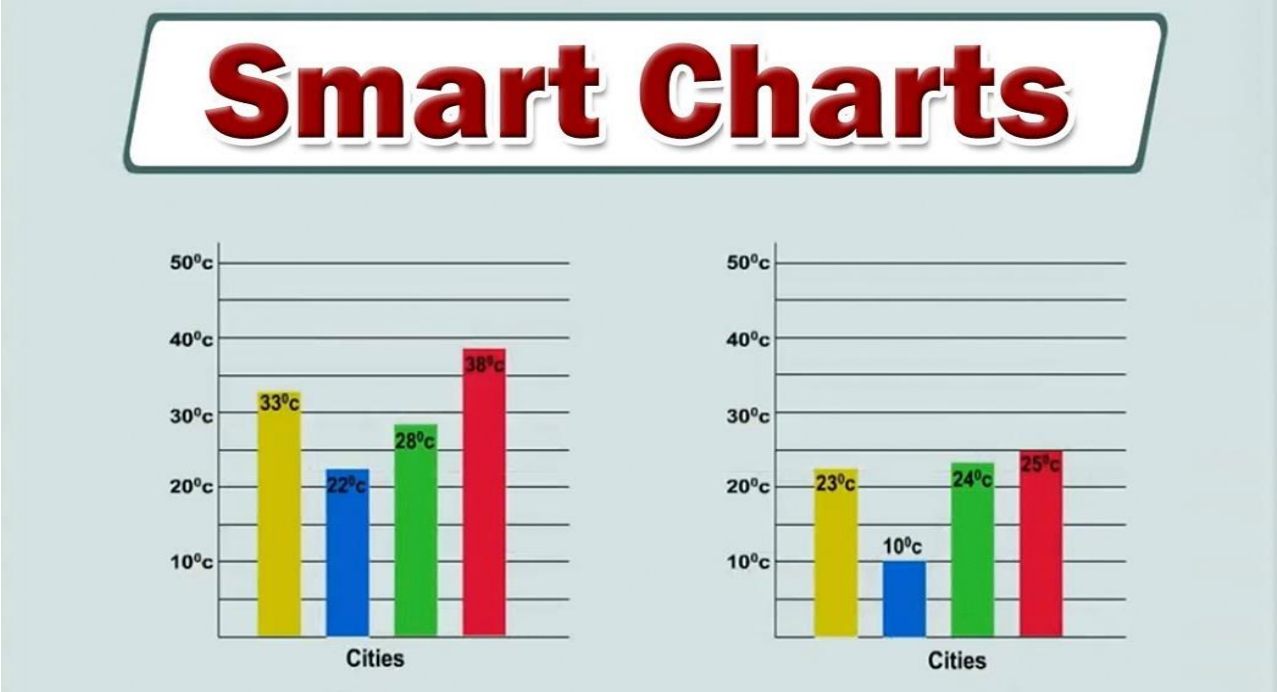
Area of square wall = s × s

= 200cm × 200cm

= 40000sq. cm

CH-14

Smart Chart



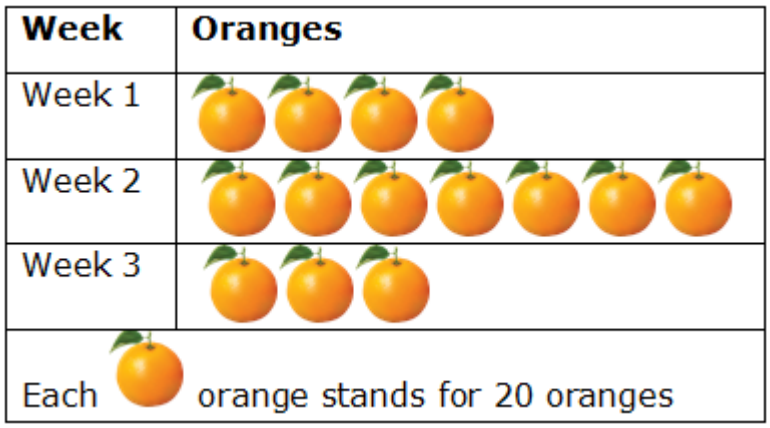
❖ Key points to remember.

- Introduction - Data Handling
- Pictorial Representation of Data
- Pie Chart / Pie Graph
- Bar Graph/Column Chart
- Activity

- **Introduction - Data Handling**
  Collection of information is called data. To keep this information we use different method is called data handling.
- **Pictorial Representation of Data**

  When we represent numerical data through pictures or graph, it is termed as pictorial representation of data.

  Example: The below graph shows how many oranges were sold in 3 weeks



Now, answer the following questions:

1) How many oranges were sold during the second week?

Solve. 20 x 7 = 140 oranges.

1) In which week the oranges sold minimum?

Solve. Week -3.

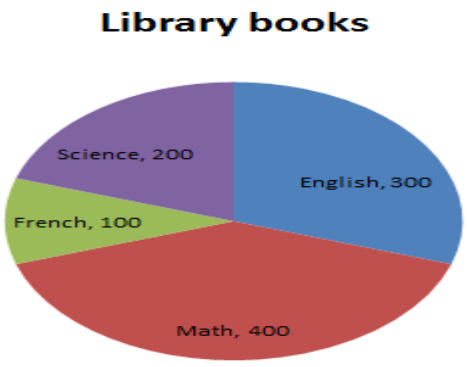
2) In which week the oranges sold maximum?

Solve. In Week 2.

- **Pie Chart / Pie Graph**

  Representing numerical data by dividing a circle into slices or sectors is called pie chart or pie graph or circle graph. Each sector in pie chart represents a fraction of whole.

  Example: In a circle below are the details of library books in the school library.



Now, answer the following questions:

1) How many books are there in the library in all?

Solve. 200+300+400+100 = 1000 books

2) Name the subject on which least number of books is there in the library.

Solve. French, 100

3) Find the number of books on Math subject in the library.

Solve.400

4) Work out the difference between the number of French books and English books.

Solve. English Books – 300

French Books – 100

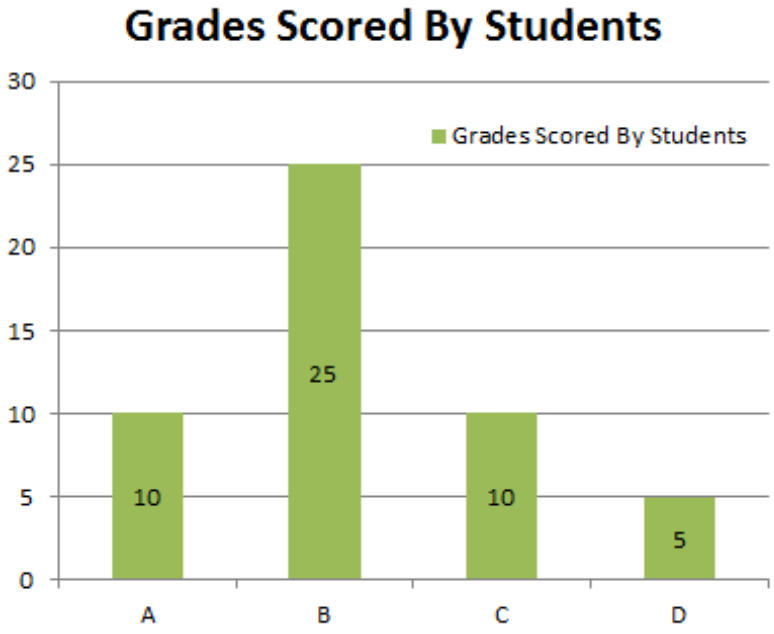
Difference = 300 – 100

= 200 books.

- **Bar Graph/Column Chart**

Bar graph is the simplest form of representing data by displaying rectangular bars of different heights proportional to the value they represent.

Example: The graph shows different grades scored by students in Class - 4.



Now, answer the following questions:

1) How many students scored Grade B?

Solve. 25 students

2) Which Grade was least scored?

Solve .Grade D

3) How many student scored Grade A?

Solve. 10 students

4) How many students are there in class - 4?

Solve. 10 + 25 + 10 + 5 = 50 students

- **The table given below shows the number of boys sold during the days of a week From a toy shop**

Day	Number of toys
Sunday	5
Monday	7
Tuesday	4
Wednesday	9
Thursday	14
Friday	7
Saturday	20

1) What is the total number of toys sold in the week?

   Solve – 5+7+4+9+14+7+20 = 66 toys.

2) The day on which maximum number of toys were sold?

   Solve – Thursday.

3) The day on which minimum number of toys were sold?

   Solve – Tuesday**.**

4) The difference in numbers of toys sold on Saturday and Wednesday.

Solve – 20 – 9 = 11 toys.

5) The days on which same number of toys were sold.

Solve – Monday and Friday.

Activity

- Complete the chart using symbols to represent the following information. One has been done for you.

  Marks scored by a student of Class IV in different subjects out of 40 marks are given below.

  i. Science = 36 marks
  ii. Hindi = 32 marks
  iii. Maths = 36 marks
  iv. English = 28 marks
  v. Drawing = 40 marks

  (☺ = 4 marks)