Class -IV

MATH-MAGIC

Specimen Copy

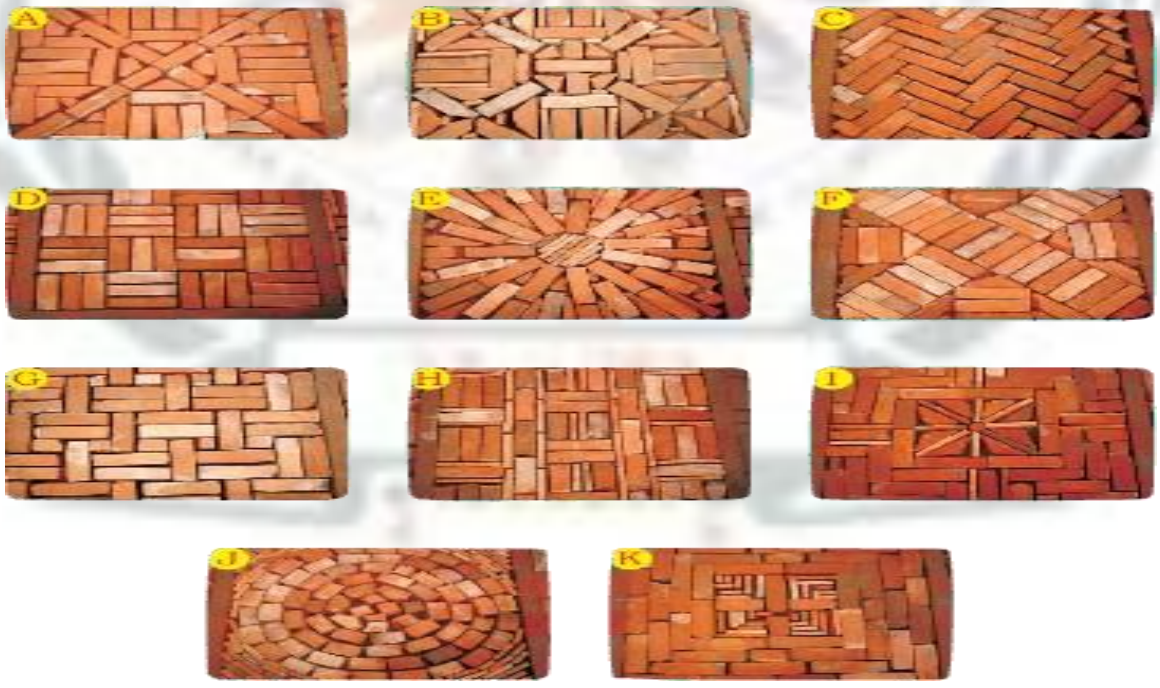
month - April

CH-1

Building with Bricks

❖ Summary:

- **What is called pattern?**
- **Geometrical shapes – 2D, 3D shapes**
- **Draw the difference shapes in 2D and 3D**
- **How to draw a Brick and its different faces, corners, sides, edges?**
- **Draw the table and write sides, corners, edges, faces of given name of shapes.**
- **Which kind of wall will not fall? why?**
- **Draw the different kind of Bricks' wall pattern.**
- **Find out the price of a Brick / Bricks.**
- **Given the table below, fill the blanks in table.**
- **Activity**



- **What is called pattern?**

- Patterns are shapes, designs, groups of numbers that repeat themselves in a predictable manner.
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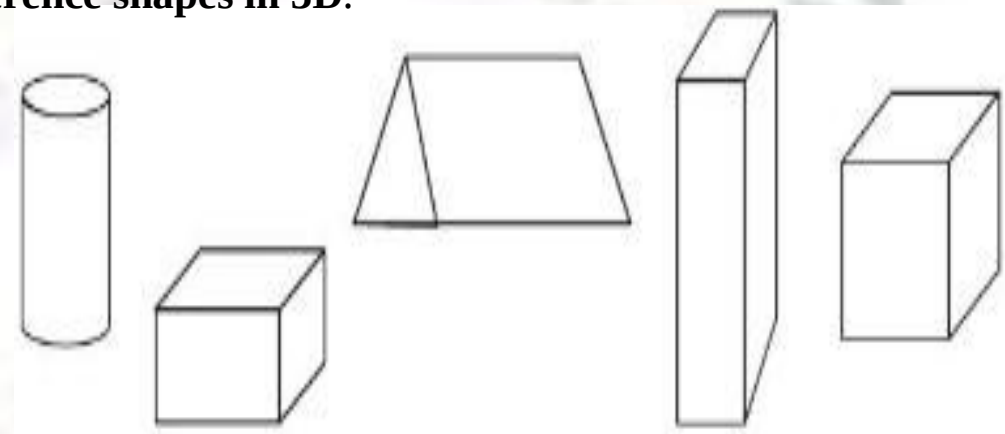
- **Geometrical shapes – 2D, 3D shapes**

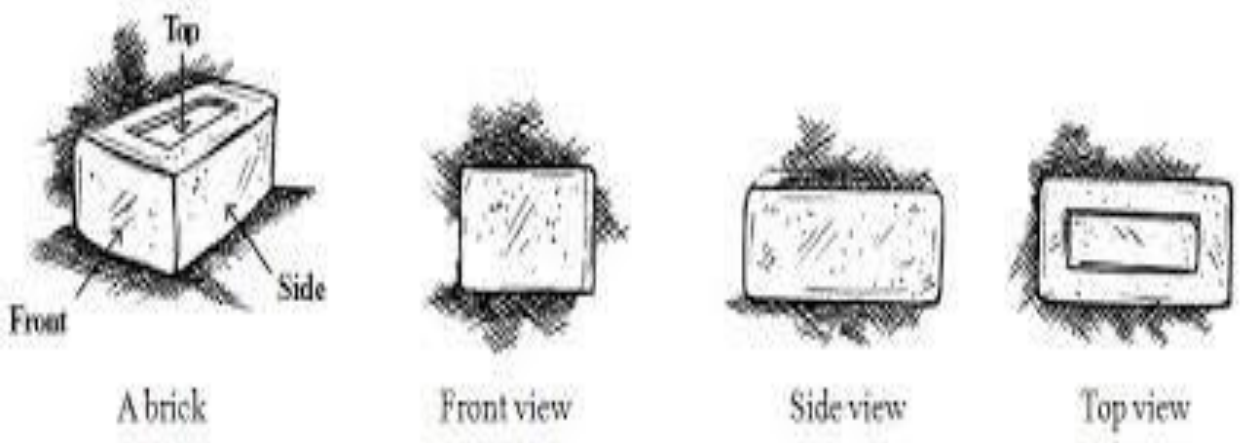
- A square, triangle, and circle are all examples of a 2D shape. However, a three-dimensional, such as length, width, and height. One example of a 3D shape is a rectangular prism, which is made up of four rectangles and two squares.

- **Draw the difference shapes in 3D**.

- Triangle
- Cuboid
- Rectangle
- Cube
- Dice



- **How to draw a Brick and its different faces, corners, sides, edges?**

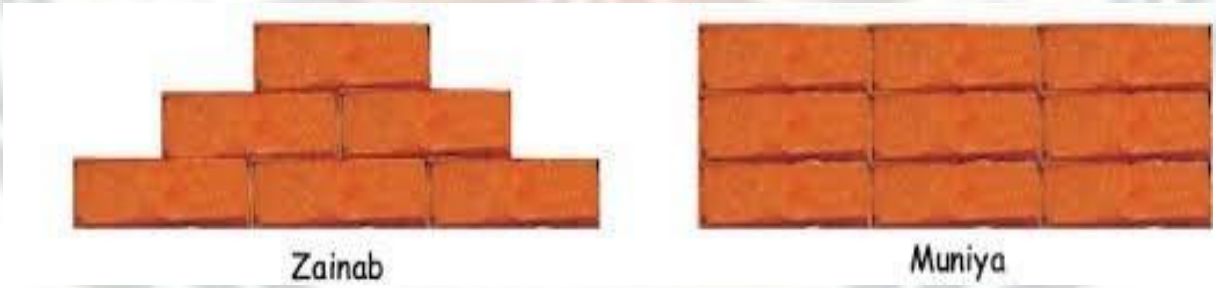


- **Draw the table and write sides, corners, edges, faces of given name of shapes.**

Sr no	Shapes	Corners	Sides	Edges	Faces
1	Rectangle	**4**	**4**	**4**	**1**
2	Square	**4**	**4**	**4**	**1**
3	Triangle	**3**	**3**	**3**	**1**
4	Cuboid	**8**	**6**	**12**	**6**
5	Cube	**8**	**6**	**12**	**6**
6	Brick	**8**	**6**	**12**	**6**
7	Cylinder	**0**	**0**	**0**	**2**
8	Circle	**0**	**0**	**0**	**1**
9	Sphere	**0**	**0**	**0**	**0**

- **Which kind of wall will not fall? why?**

- One day Zainab and Muniya are playing with bricks and making their walls. Each makes a different wall.



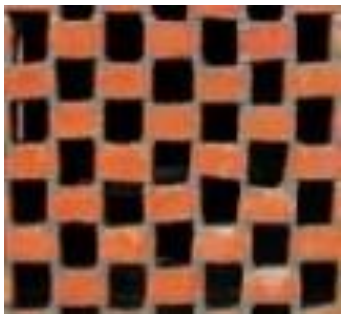
- Zainab says her wall will not fall easily, Masons too do not put bricks one on top of the other, as Munia has done.
- What do you think? Which wall will be stronger? **<u>Zainab's wall</u>**
-

- **Draw the different kind of Bricks' wall pattern.**

- **'Jaali'**

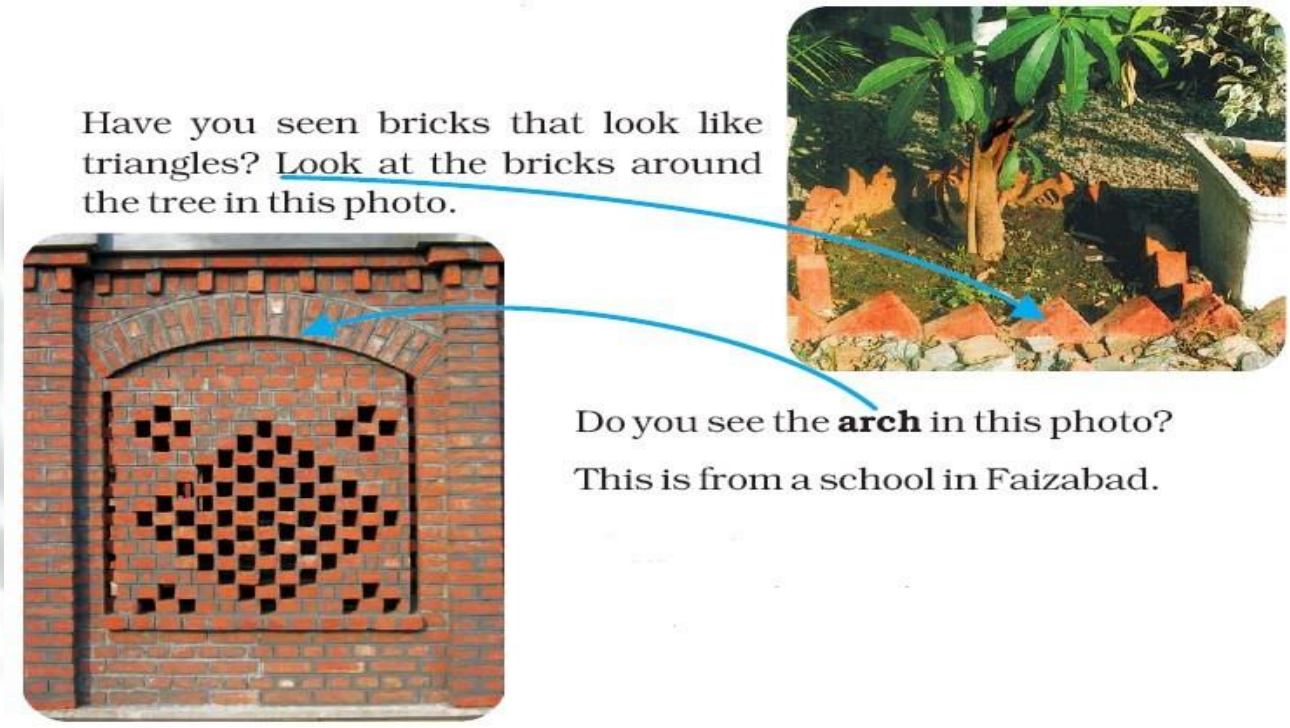
  The Masons who built School has also made different types of 'jaali' patterns on the walls.

  Also, in Kerala a library building walls made with 'jaali' pattern.



- **Triangle**

  The triangle pattern used to make boundary surrounding trees, plants etc… Triangle shapes also used in library in Kerala which made with triangle patterns of bricks.



- **An Arch**

  This type of pattern used to make a design in windows, also makes bridges over river or cannel that time uses a special arch. We can see arches in rainbow, bridge, tunnel etc

  In Orchha, Ghoonghat waali Mehraab building made arch with a veil.

- **Find out the price of a Brick / Bricks.**
- **Unitary Method**

- Finding out the value of one from many and then the value of many from the one is called unitary method.

1. If a Brick cost Rs. 1 then the cost of 500 bricks will be **Rs. 500**.

   a 1 brick cost = Rs.1

   therefore, 500 bricks cost = Rs. (?)

   = 500 x Rs.1 = **500 Rs**

2. If the cost of a brick is Rs. 2 then the cost of 1000 bricks are **Rs. 2000**.
3. If the cost of a brick Rs. 5 then the cost of 2000 bricks are **Rs. 10,000**.
4. If the cost of 2000 bricks are Rs. 8000 then the cost of 1 brick is **Rs. 4.**
5. If the cost of 6000 bricks are Rs. 3000 then the cost of 1 brick is **Rs. 2**.

- **Given the table below, fill the blanks in table.**

Sr no	No of Bricks	Cost of bricks	No of Bricks	Cost of bricks
1	1000	Rs. 6000	500	Rs. 3000
2	2000	Rs. 18000	1000	Rs. 9000
3	6000	Rs. 30000	2000	Rs. 10000
4	8000	Rs. 24000	3000	Rs. 9000
5	10000	Rs. 30000	4000	Rs. 12000

- **Activity**

- Make the chart paper and draw the picture chart of bricks, how it made.

A

B

D

C

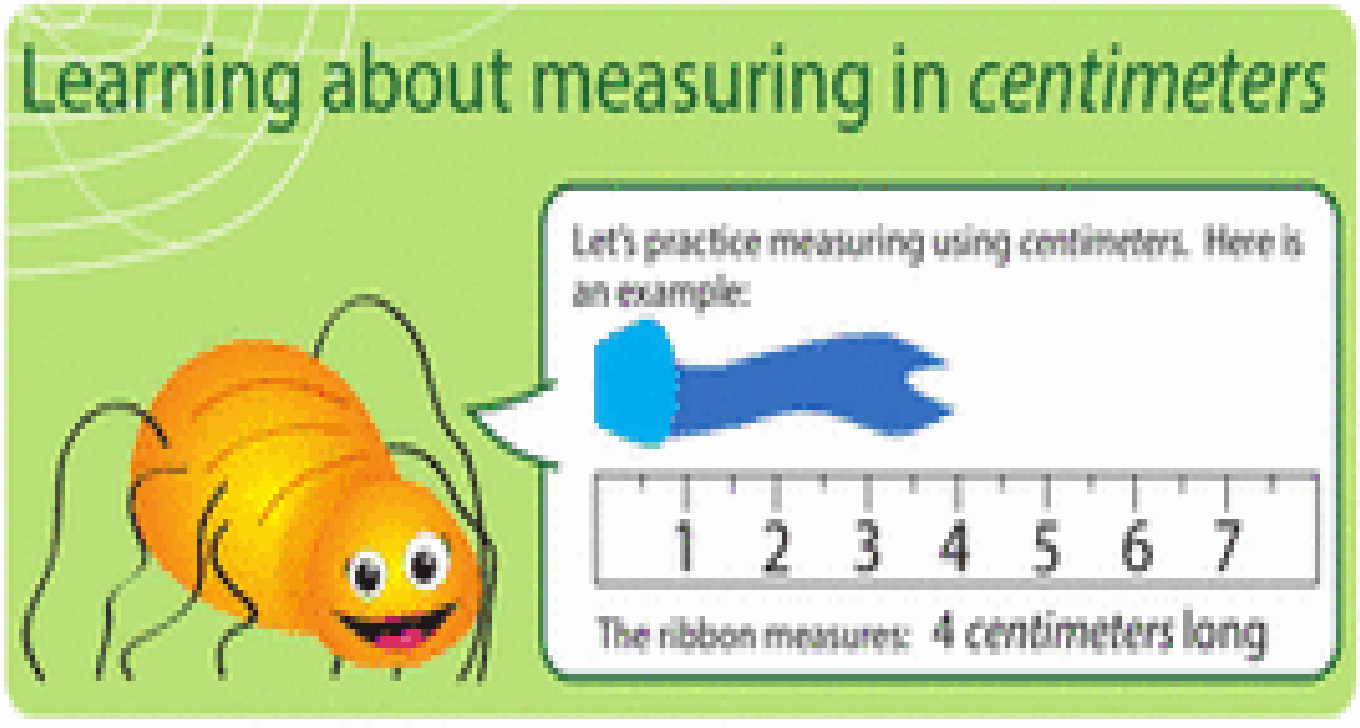
CH-2

long and short

❖ Summary

- **Measurement of length**

- **Draw the line segment of the following.**
- **Which is a better unit to measure these? (cm, m or km)**
- **Conversion of measures from higher to lower units**
- **Conversion of measures from lower to higher units**
- **Convert the following lengths into metres**
- **Convert the following lengths into metre and centimetre**
- **Addition and Subtraction**
- **Metric Measure of Length**
- **Complete the table and answer the questions below**
- **Read the following table and answer the following question**



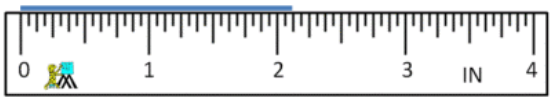
- **Measurement of length**

  Measurement of something from its one end to the other is called its length. The standard unit of length is meter. We use different units to measure different length. Millimetre, centimetre. Metre is used to measure average distance. Kilometre used to measure long distance.

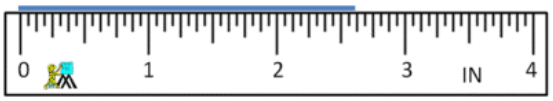
  100 centimetre = 1 metre

  1000 metre = 1 kilometre

1) How long? _____



2) How long? _____



- **Draw the line segment of the following.**

1. 4 cm

   _____

2. 7 cm

   _____

3. 11 cm

   _____

4. 9.5 cm

   _____

5. 10 cm

   _____

- **Which is a better unit to measure these? (cm, m or km)**

  a. Length of a pin – **cm**

  b. Height of a house – **m**

  c. Distance the scooter travels – **km**

  d. Length of a park - **m**

e. Length of a pen – **cm**

f. Height of your pet – **cm**

g. Length of 500 rupees note – **cm**

h. Distance from Bangalore to Rajasthan – **km**

i. Thickness of your lunch box – **cm**

j. Height of Qutub Minar – **m**

k. Height of your pet – **cm**

l. Length of 500 rupees note – **cm**

m. Distance from Bangalore to Rajasthan – **km**

n. Thickness of your lunch box – **cm**

o. Height of Qutub Minar – **m**

- **Conversion of measures from higher to lower units**

We always <u>multiply</u> when we change higher unit to lower unit.

Example 1: Change 4km into meters

1km =1000m

Therefore, 4 x 1000m = 4000m

<u>Example 2:</u> Change 25m into centimetres

1m = 100cm

Therefore, 25 x 100cm = 2500cm

1. 4 km = 4 x 1000m = 4000m
2. 12 km = 12 x 1000m = 12000m
3. 3 km = 3 x 1000m = 3000m
4. 10 km = 10 x 1000m = 10000m
5. 12 m = 12 x 100 = 1200cm
6. 3m = 3 x 100 = 300cm

- **Conversion of measures from lower to higher units**

We always <u>divide</u> when we change lower unit to higher unit.

Example 1: Change 6000m to kilometre

1000m = 1km

Therefore, 6000 ÷ 1000 = 6km

1. 2000m = 2000 ÷ 1000 = 2km
2. 4000m = 4000 ÷ 1000 = 4 km
3. 12000m = 12000 ÷ 1000 = 12km
4. 6000m = 6000 ÷ 1000 = 6km

- **Convert the following lengths into metres.**

Example: 9 km 236 m

= 9 x 1000 m + 236 m

= 9000 m + 236 m

= 9236 m

1. 7 km 205m
2. 12km 60m
3. 19km 215m
4. 16km 115m

- **Convert the following lengths into metre and centimetre.**

Example: 526cm = 500 + 20 + 6 cm
= 5 x 100 + 20 + 6 cm
= 5 m + 26 cm
= 5 m 26 cm

1. 327 cm
2. 951 cm
3. 702 cm
4. 864 cm

- **Addition and Subtraction**

Step1: Write the units on the top.

Step2: Write the numbers in proper place below the units. Write zero in empty place.

Example: Add 45km 34m and 34km 5m

	km	m
	45	034
+	34	005
	79	039

- **Add the following:**

a. 21km 1m + 31km 7m

b. 31km 605m + 12km 22m

- **Subtract the following:**
- Example: Subtract 15km 30m from 35km 45m

	km	m
	35	045
-	15	030
	20	015

a. 48km – 24km 200m

	km	m
	48	000
-	24	200
	23	800

b. 85km 542m – 14km 34m

	km	m
	48	542
-	24	034
	24	508

- **Metric Measure of Length**

1. Answer the following:

a. How many meters are there in 22km? **22 x 100 = 2200 m**

b. What is the standard unit of length? **Metre**

c. Which unit of length is 100 times greater than meter? **Kilometre**

2. Word problem:

a. Arya travelled 5km 300m by car and 1km 100m by bike. What distance did he travel in all?

5 km 300 m	by car
+ 1 km 100 m	by bike
6 km 400 m	he travels in all

b. Gaurav is 92cm tall. His brother is 60cm taller than him. What is the height of his brother?

92 cm
+ 60 cm
152 cm height of his brother.

- **Complete the table and answer the questions below**

sl.no	name of the plant	last months height	this month height	cm-grown
1	Rose	28cm	29cm	1cm
2	Mango	13cm	15cm	2 cm
3	Bamboo	22cm	28cm	6 cm
4	Tulsi	8cm	10cm	2 cm

a. The plant which has grown maximum is **bamboo.**

b. The plant which has grown minimum is **Mango, Tulsi.**

c. The plant which has grown by 6 cm is **bamboo.**

d. The plants which has grown by 2 cm is **Mango, Tulsi.**

- **Read the following table and answer the following question**

SL.NO	NAMES	DISTANCE OF SIXES BEATENIN A CRICKET MATCH
1	SACHIN	90m
2	YUVARAJ	101m 5cm
3	GAMBHIR	52m 25cm

a. What is the difference between the distance hit by Sachin and Yuvaraja?
Ans: 11 m 5 cm.

- **Activity**

Make your own height measurement in cm.