SNBP International & Sr. Secondary School, Chikhali, Pune.
Affiliation No. 1130703
Academic session 2024-25
Notes-(Term-2)
Sub-math

Prepared by -Pranjali Patil L-14 Perimeter ,Area and Volume.

Pre -Activity- Solved in the textbook.

Concrete Stage

Use a ruler and a protractor to draw the following shapes. Also, work out their perimeters and areas.

a. Rectangle with length 5 cm and width 3 cm

Perimeter of rectangle = 2 x (l + w) = 2 x 8 = 16cm
Area of rectangle = l x w = 5 x 3 = 15 sq. cm

b. Isosceles (right angle) triangle with sides 12 cm, 5 cm, and 13 cm

Perimeter of isosceles triangle = side 1 + side 2+ side 3 = 12 + 5 + 13 = 30 cm
Area of isosceles triangle = ½ x b x h = ½ x 12 x 5 = 30 sq. cm

c. Square with side 4 cm

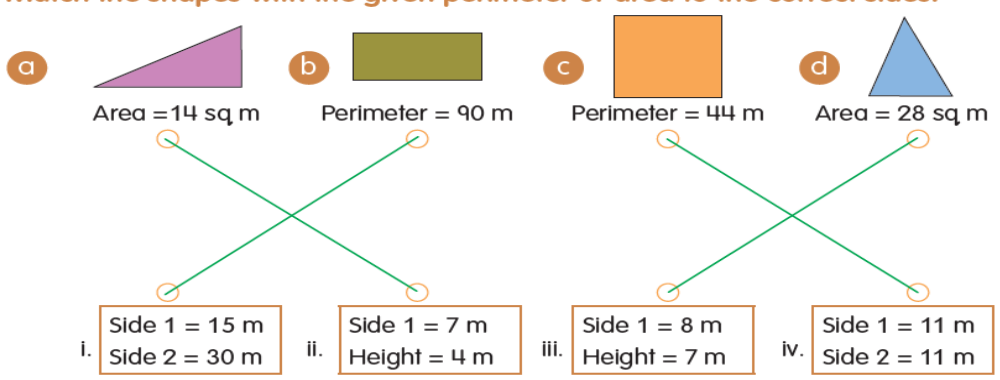
Perimeter of square = 4 x side = 4 x 4 = 16cm
Area of square = side x side = 4 x 4 = 16 sq. cm

d. Right triangle with height 3 cm and base 6 cm

Area of right triangle = ½ x b x h = ½ x 6 x 3 = 9 sq. cm

Pictorial Stage

Match the shapes with the given perimeter or area to the correct sides.



Abstract Stage

1 **Work out the perimeter of the following shapes with the given dimensions.**

a Rectangle with sides 9 m and 4 m

Perimeter of the rectangle
= 2 × (9 + 4) = 2 × 13 = 26 m

b Square with side 7 m

Perimeter of square
= 4 × 7 = 28 m

c Triangle with sides 6 cm, 8 cm, and 11 cm

Perimeter of triangle
= 6 + 8 + 11 = 25 cm

d Rectangle with sides 20 m and 100 cm

Perimeter of rectangle
= 2 × (100 + 2000)
= 2 × 2100 = 4200 cm

e Rectangle with sides 8 m and 6 m

Area of rectangle = 8 × 6
= 48 sq. m

f Square with side 8 cm

Area of square = 8 × 8
= 64 sq. cm

Concrete Stage

Use a measuring jar to record the volumes of the following items.

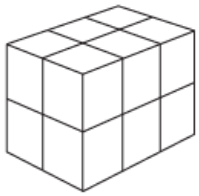
a ten ₹10 coins

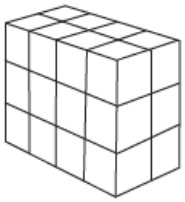
b 2 apples

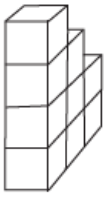
c 5 spoons

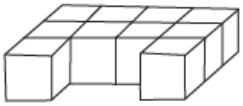
Pictorial Stage

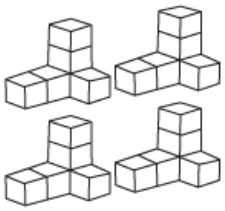
Match the shapes which have equal volumes.

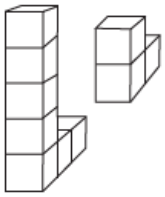
a 

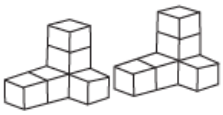
b 

c 

d 

i. 

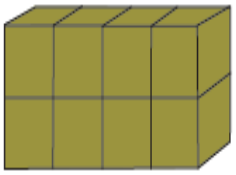
ii. 

iii. 

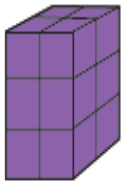
iv. 

Abstract Stage

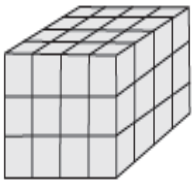
Work out the volumes of the following.

a 

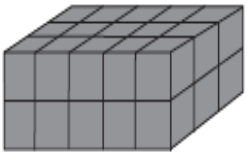
8 sq. unit

b 

12 sq. unit

c 

48 sq. unit

d 

30 sq. unit

Blooming Questions

1. **Work out the following number stories.**

a. Shyam wants to fence his rectangular garden of length 56 m and width 42 m. How much wire does he need for fencing the garden?

Answer: Shyam needed 196 m wire for fencing his rectangular garden.

b. Rita has a garden of length 20 m and width 10 m in front of her house. She wants to plant trees along the edges of the garden. The distance between any two plants is 1 m. How many trees can she plant?

Answer: Rita can plant 56 trees in her garden.

2. **A square has a perimeter of 120 cm. Find its area.**

Answer: Area of the square = side × side = 30 × 30 = 900 sq. cm

3. **A rectangular banner has length 6 m and width 12 m. Find the area.**

Answer: Area of rectangular banner = 6 × 12 = 72 sq. m

4. **The perimeter of the square door is 16 m. What is the length of the side of the door?**

Answer: Side = 4 cm

5. **The length of a cube of 5 cm is doubled. How much of its volume will increase?**

Answer: Increase in volume = 1000 – 125 = 875 cubic cm

6. **If 6 squares having the side of 2 cm each are joined together. What will be the area of the joined figure?**

Answer: Area of the joined figure = 24 sq. cm

Post Activity- Solve mental math in the NB.

S.Teacher H.O.D. Co-Ordinator Principal