



# Perimeter, Area and Volume

## Activity-1

1. (a) Perimeter =  $\overline{AB} + \overline{BC} + \overline{CA}$   
 $= 6 \text{ cm} + 11 \text{ cm} + 9 \text{ cm} = 26 \text{ cm}$   
 It is a scalene triangle.
- (b) Perimeter =  $\overline{PQ} + \overline{QR} + \overline{RP}$   
 $= (8.3 + 8.3 + 8.3) \text{ cm} = 24.9 \text{ cm}$   
 It is an equilateral triangle.
- (c) Perimeter =  $\overline{XY} + \overline{YZ} + \overline{ZX}$   
 $= (7.5 + 7.5 + 12) \text{ cm} = 27 \text{ cm}$   
 It is an isosceles triangle.
2. (a) Perimeter of the triangle =  $8 \text{ cm} + 10 \text{ cm} + 14 \text{ cm} = 32 \text{ cm}$
- (b) Perimeter of equilateral triangle =  $3 \times \text{side} = 3 \times 6.5 \text{ cm}$   
 $= 19.5 \text{ cm}$
- (c) Perimeter of the triangle =  $8 \text{ cm} + 8 \text{ cm} + 5 \text{ cm} = 21 \text{ cm}$
3. (a) Perimeter of the square =  $4 \times \text{side} = 4 \times 6 \text{ cm} = 24 \text{ cm}$
- (b) Perimeter of the square =  $4 \times 5 \text{ cm} = 20 \text{ cm}$
- (c) Perimeter of the square =  $4 \times 8.5 \text{ cm} = 34 \text{ cm}$
- (d) Perimeter of the square =  $4 \times 4.5 \text{ cm} = 18 \text{ cm}$
4.  $\therefore$  Perimeter of the rectangle =  $2(l + b)$
- (a) Perimeter =  $2(6 + 4) \text{ cm} = 2 \times 10 \text{ cm} = 20 \text{ cm}$
- (b) Perimeter =  $2(5 + 2.5) \text{ cm} = 2 \times 7.5 \text{ cm} = 15 \text{ cm}$
- (c) Perimeter =  $2(3 + 1.2) \text{ cm} = 2 \times 4.2 \text{ cm} = 8.4 \text{ cm}$
5. We know that, perimeter of the square =  $4 \times \text{side}$
- ◆ Perimeter =  $4 \times 4.5 \text{ cm} = 18 \text{ cm}$
- ◆ Side =  $\frac{\text{Perimeter}}{4} = \frac{624}{4} = 156 \text{ m}$
- ◆ Perimeter =  $4 \times 9.25 \text{ cm} = 37 \text{ cm}$
- ◆ Side =  $\frac{\text{Perimeter}}{4} = \frac{216}{4} = 54 \text{ m}$

Now, perimeter of the rectangle =  $2(\text{length} + \text{breadth})$

◆ Perimeter =  $2(l + b)$

$\Rightarrow 400 = 2(140 + b) \Rightarrow 400 = 280 + 2b \Rightarrow 2b = 120 \Rightarrow b = 60 \text{ cm}$

◆ Perimeter =  $2(l + b) = 2(4.3 + 2.8) = 2 \times 7.1 \text{ m} = 14.2 \text{ m}$

◆ Perimeter =  $2(l + b) \Rightarrow 90 = 2(l + 15)$

$\Rightarrow 90 = 2l + 30$

$\Rightarrow 2l = 60 \Rightarrow l = 30 \text{ m}$

◆ Perimeter =  $2(l + b) \Rightarrow 78 = 2(l + b)$

$\Rightarrow 78 = 2(l + 19)$

$\Rightarrow 78 = 2l + 38$

$\Rightarrow 2l = 40 \Rightarrow l = 20 \text{ m}$

Putting the values in table, we get

Side of the square	Perimeter	Length	Breadth	Perimeter of rectangle
4.5 cm	18 cm	140 cm	60 cm	400 cm
156 m	624 m	4.3 m	2.8 m	14.2 m
9.25 cm	37 cm	30 m	15 m	90 m
54 m	216 m	20 m	19 m	78 m

6. Perimeter of the square =  $4 \times \text{side}$

$\Rightarrow 84 = 4 \times \text{side}$

$\Rightarrow \text{side} = \frac{84}{4} = 21 \text{ m.}$

7. The length of the lace is equal to the perimeter of the rectangular table cloth.

So, perimeter =  $2(l + b) = 2(6 + 4) = 2 \times 10 = 20 \text{ cm.}$

8. The distance covered by Rahul to complete one round of the park is equal to the perimeter of the rectangular park.

Perimeter =  $2(l + b) = 2(30 + 22) = 2 \times 52 = 104 \text{ m}$

$\therefore$  Distance covered by Rahul to complete 3 rounds of the park

$= 3 \times 104 \text{ m} = 312 \text{ m}$

So, the distance covered by Rahul to complete 3 rounds of the park is 312 m.

9. The perimeter of square park =  $4 \times \text{side}$

$= 4 \times 110 \text{ m} = 440 \text{ m}$

Thus, the total wire required to fence the square park is 440 m.

$$\text{Cost of fencing 1 m} = ₹ 15$$

$$\therefore \text{Cost of fencing 440 m} = ₹ 15 \times 440 = ₹ 6600$$

So, the cost of fencing a square park is ₹ 6,600.

10. Perimeter of the triangle = sum of its sides  
 $= (25 + 25 + 36) \text{ cm} = 86 \text{ cm}$

So, the perimeter of the triangle is 86 cm.

11. The length of ribbon required is equal to the perimeter of the rectangular frame.

$$\begin{aligned} \text{Perimeter} &= 2(l+b) \\ &= 2(5.5+4.8) = 2 \times 10.3 = 20.6 \text{ m} \end{aligned}$$

The length of ribbon required to frame a picture will be 20.6 m.

Also, the length of ribbon required to frame 4 such pictures will be  
 $= 4 \times 20.6 \text{ m} = 82.4 \text{ m}.$

12. The length and breadth of rectangular park are 20 m and 13 m respectively.

$$\text{Perimeter} = 2(l+b) = 2(20+13) = 2 \times 33 = 66 \text{ m}$$

Aman jogs and completes 4 rounds of the park everyday.

$$\therefore \text{Distance covered by Aman everyday} = 4 \times 66 \text{ m} = 264 \text{ m}.$$

### Activity-2

- (a) Area of the square  $= l \times l = 2.2 \times 2.2 = 4.84 \text{ sq cm}$   
(b) Area of the rectangle  $= l \times b = 4.7 \times 2.5 = 11.75 \text{ sq cm}$   
(c) Area of the rectangle  $= l \times b = 5.8 \times 3.5 = 20.30 \text{ sq cm}$   
(d) Area of the square  $= l \times l = 3.9 \times 3.9 = 15.21 \text{ sq cm}$
- Area of rectangle  $= l \times b$   
(a) Area  $= 9 \times 4.5 = 40.5 \text{ sq cm}$   
(b) Area  $= 16.5 \times 8 = 132.0 \text{ sq cm}$   
(c) Area  $= 27 \times 12 = 324 \text{ sq cm}$
- Length of rectangular tile  $= 24 \text{ cm} = 240 \text{ mm}$   
Breadth of rectangular tile  $= 40 \text{ mm}$   
 $\therefore \text{Area} = l \times b = 240 \times 40 \text{ sq mm}$   
 $= 9600 \text{ sq mm}$

$$\begin{aligned}
 4. \quad \text{Length of the rectangle} &= 116 \text{ m} \\
 \text{Breadth of the rectangle} &= \frac{1}{4} \times \text{length} \\
 &= \frac{1}{4} \times 116 \text{ m} = 29 \text{ m} \\
 \therefore \quad \text{Area} &= l \times b \\
 &= 116 \times 29 = 3364 \text{ sq m}
 \end{aligned}$$

$$\begin{aligned}
 5. \quad \text{Length of the square cloth} &= 48 \text{ cm} \\
 \therefore \quad \text{Perimeter} &= 4 \times l = 4 \times 48 = 192 \text{ cm} \\
 \text{Area} &= l \times l = 48 \times 48 = 2304 \text{ sq cm}
 \end{aligned}$$

So, the perimeter of square cloth is 192 cm and area is 2304 sq cm.

$$\begin{aligned}
 6. \quad \text{Length of the rectangle} &= 6 \text{ m} \\
 \text{Breadth of the rectangle} &= 120 \text{ cm} = 1.2 \text{ m} \\
 \therefore \quad \text{Area} &= 6 \times 1.2 \text{ sq m} = 7.2 \text{ sq m}
 \end{aligned}$$

$$\begin{aligned}
 7. \quad \text{The area of a rectangular floor} &= l \times b \\
 &= 16 \times 11 \text{ sq m} = 176 \text{ sq m} \\
 \text{The length of each tile} &= 40 \text{ cm} = 0.4 \text{ m} \\
 \therefore \quad \text{Area of each tile} &= 0.4 \times 0.4 = 0.16 \text{ sq m}
 \end{aligned}$$

$$\begin{aligned}
 \text{Thus, number of tiles required} &= \frac{\text{Area of floor}}{\text{Area of one tile}} \\
 &= \frac{176}{0.16} = 1100
 \end{aligned}$$

Thus, number of tiles required is 1100.

$$\begin{aligned}
 8. \quad \text{Perimeter of the square field} &= 176 \text{ m} \\
 \Rightarrow \quad 4 \times l &= 176 \text{ m} \\
 \Rightarrow \quad l &= \frac{176}{4} = 44 \text{ m} \\
 \therefore \quad \text{Area of the field} &= l \times l = 44 \times 44 = 1936 \text{ sq m}
 \end{aligned}$$

Now, the cost of laying grass on it is ₹ 5.50 per sq m.

$$\begin{aligned}
 \therefore \quad \text{The cost of laying grass on } 1936 \text{ sq m} &= ₹ 5.50 \times 1936 \\
 &= ₹ 10,648
 \end{aligned}$$

9. Length of the mat = 3.5 m  
Area of rectangular mat = 5.6 sq m

$$\therefore \text{Breadth} = \frac{\text{Area}}{\text{Length}} = \frac{5.6}{3.5} = 1.6 \text{ m}$$

Thus, the breadth of rectangular mat is 1.6 m.

10. Length of a sheet = 324 cm  
Breadth of a sheet = 144 cm  
 $\therefore$  Area of a sheet =  $(324 \times 144)$  sq cm  
Now, length of a card = 16 cm  
breadth of a card = 12 cm  
 $\therefore$  Area of card =  $(16 \times 12)$  sq cm

Thus, the number of cards can be made out of a sheet =  $\frac{\text{Area of a sheet}}{\text{Area of a card}}$

$$= \frac{324 \times 144}{16 \times 12} = 27 \times 9 = 243.$$

11. The distance covered by a boy in going five times around the square park is 1025 m.

$$\therefore \text{Perimeter of the square park} = \frac{1025}{5} = 205 \text{ m}$$

$$\text{Now, perimeter of square} = 4 \times l$$

$$\Rightarrow 4l = 205$$

$$\Rightarrow l = \frac{205}{4}$$

$$\therefore \text{Area of the park} = l \times l$$

$$= \frac{205}{4} \times \frac{205}{4} = \frac{205 \times 205}{4 \times 4}$$

$$= 2626.56 \text{ sq m}$$

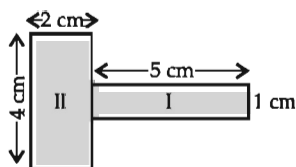
So, the area of the park is 2626.56 sq m.

12. Length of the rectangle = 50 cm  
Breadth of the rectangle = 45 cm  
Area of the rectangle =  $50 \times 45$  sq cm = 2250 sq cm  
Side of the square = 48 cm  
 $\therefore$  Area of the square =  $48 \times 48$  sq cm  
= 2304 sq cm

So, Square has more area.

$$\text{Difference} = (2304 - 2250) \text{ sq cm} = 54 \text{ sq cm}$$

13. (a)



Area of part I

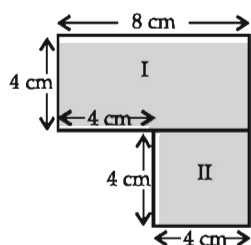
$$= (5 \times 1) \text{ sq cm} = 5 \text{ sq cm}$$

Area of part II

$$= (4 \times 2) \text{ sq cm} = 8 \text{ sq cm}$$

$$\therefore \text{Area of combined figure} = (8 + 5) \text{ sq cm} = 13 \text{ sq cm}$$

(b)



Area of part I

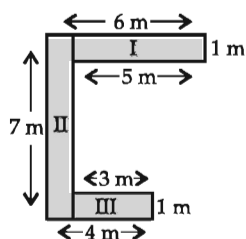
$$= (8 \times 4) \text{ sq cm} = 32 \text{ sq cm}$$

Area of part II

$$= (4 \times 4) \text{ sq cm} = 16 \text{ sq cm}$$

$$\therefore \text{Area of combined figure} = (32 + 16) \text{ sq cm} = 48 \text{ sq cm}$$

(c)



Area of part I

$$= (6 \times 1) \text{ sq m} = 6 \text{ sq m}$$

Area of part II

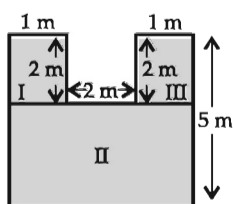
$$= (7 \times 1) \text{ sq m} = 7 \text{ sq m}$$

Area of part III

$$= (3 \times 1) \text{ sq m} = 3 \text{ sq m}$$

$$\therefore \text{Area of combined figure} = (6 + 7 + 3) \text{ sq m} = 16 \text{ sq m}$$

(d)



Area of part I

$$= (2 \times 2) \text{ sq m} = 4 \text{ sq m}$$

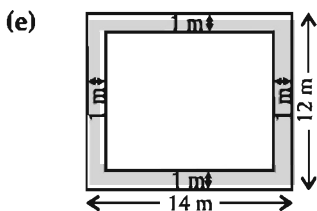
Area of part II

$$= (4 \times 5) \text{ sq m} = 20 \text{ sq m}$$

Area of part III

$$= (2 \times 2) \text{ sq m} = 4 \text{ sq m}$$

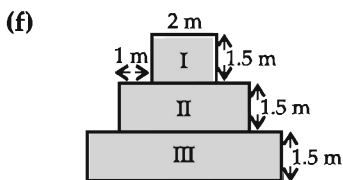
$$\therefore \text{Area of combined figure} = (4 + 20 + 4) \text{ sq m} = 28 \text{ sq m}$$



Area of inner figure  
 $= (12 \times 12) \text{ sq m} = 144 \text{ sq m}$

Area of outer figure  
 $= (14 \times 14) \text{ sq m} = 196 \text{ sq m}$

$\therefore$  Area of the shaded region  $= (196 - 144) \text{ sq m} = 52 \text{ sq m}$



Area of part I  
 $= (2 \times 1.5) \text{ sq m} = 3 \text{ sq m}$

Area of part II  
 $= (4 \times 1.5) \text{ sq m} = 6 \text{ sq m}$

Area of part III  
 $= (6 \times 1.5) \text{ sq m} = 9 \text{ sq m}$

$\therefore$  Area of the shaded region  $= (3 + 6 + 9) \text{ sq m} = 18 \text{ sq m}$

14. The total cost of white washing a wall at ₹ 25 per sq m is ₹ 12150.

$$\text{Area of the wall} = \frac{\text{Total cost}}{\text{Rate}} \text{ m}^2$$

$$\therefore \text{Area of the wall} = \frac{\text{₹ } 12150}{\text{₹ } 25} = 486 \text{ sq m}$$

Also, length of the wall = 27 m

$$\therefore \text{Breadth of the wall} = \frac{\text{Area}}{\text{Length}} = \frac{486}{27} = 18 \text{ m}$$

So, the breadth of the wall is 18 m.

### Activity-3

- $l = 40 \text{ cm}$ ,  $b = 24 \text{ cm}$ ,  $h = 18 \text{ cm}$   
 $\therefore V = l \times b \times h = 40 \times 24 \times 18 = 17280 \text{ cu cm}$
- $V = l \times l \times l = 6.2 \times 6.2 \times 6.2 = 238.328 \text{ cu cm}$   
 $\therefore$  The volume of cubical container is 238.328 cu cm.
- (a)  $l = 4 \text{ cm}$ ,  $b = 1 \text{ cm}$ ,  $h = 2 \text{ cm}$   
 $V = l \times b \times h = 4 \times 1 \times 2 = 8 \text{ cu cm}$   
 (b)  $l = 2.5 \text{ cm}$   
 $V = l \times l \times l = 2.5 \times 2.5 \times 2.5 = 15.625 \text{ cu cm}$

4. Volume of one brick =  $(20 \times 16 \times 8)$  cu cm

Length of the wall = 10 m = 1000 cm

Breadth of the wall = 5 m = 500 cm

Height of the wall = 64 cm

$\therefore$  Volume of the wall =  $1000 \times 500 \times 64$  cu cm

$$\begin{aligned} \text{Number of bricks required} &= \frac{\text{Volume of the wall}}{\text{Volume of one brick}} \\ &= \frac{1000 \times 500 \times 64}{20 \times 16 \times 8} = 12500 \end{aligned}$$

So, 12500 bricks will be required.

5. Volume of the water tank = 576 l = 576000 cu cm

Length of the water tank = 160 cm

Depth of the water tank = 45 cm

$$\begin{aligned} \therefore \text{Width of the water tank} &= \frac{\text{Volume}}{\text{length} \times \text{depth}} \\ &= \frac{576000}{160 \times 45} = 80 \text{ cm} \end{aligned}$$

So, width of the water tank is 80 cm.

6. Length of the cube = 60 cm

$\therefore$  Volume of the cube =  $60 \times 60 \times 60$  cu cm = 216000 cu cm

Volume of the metal rod =  $180 \times 120 \times 100$  cu cm

$$\begin{aligned} \therefore \text{Number of cubes formed} &= \frac{\text{Volume of the metal rod}}{\text{Volume of one cube}} \\ &= \frac{180 \times 120 \times 100}{60 \times 60 \times 60} = 10 \end{aligned}$$

So, 10 cubes can be formed.

### Mental Maths Corner

1. (a) (iv)      (b) (iii)      (c) (ii)      (d) (iii)      (e) (iv)      (f) (ii)

2. (a) 256 sq m    (b) sq cm    (c) 8 cu cm    (d) 1000



## Review Exercise

1. (a) false                      (b) true                      (c) true                      (d) false

2. (a) Perimeter of square =  $4 \times l = 4 \times 13 \text{ cm} = 52 \text{ cm}$

(b) Perimeter of triangle =  $(7 + 6 + 3) \text{ cm} = 16 \text{ cm}$

(c) Perimeter of rectangle =  $2(l + b) = 2(10 + 4) = 2 \times 14 = 28 \text{ cm}$

(d) Perimeter of square =  $4 \times l = 4 \times 17 \text{ cm} = 68 \text{ cm}$

3. (a)  $l = 8.5 \text{ cm}$ ,  $b = 2.5 \text{ cm}$

$\therefore$  Area of rectangle =  $8.5 \times 2.5 \text{ sq cm} = 21.25 \text{ sq cm}$

(b)  $l = 32 \text{ m}$ ,  $b = 0.5 \text{ m}$

$\therefore$  Area of rectangle =  $32 \times 0.5 \text{ sq m} = 16 \text{ sq m}$

4. The length of rectangular field =  $72 \text{ m}$

Its breadth =  $\frac{1}{3} \times 72 \text{ m} = 24 \text{ m}$ .

$\therefore$  Perimeter =  $2(l + b) = 2(72 + 24) \text{ m} = 2 \times 96 \text{ m} = 192 \text{ m}$

and area =  $l \times b = 72 \times 24 \text{ sq m} = 1728 \text{ sq m}$

5. Side of the square tile =  $12 \text{ cm}$

$\therefore$  Area of one tile =  $12 \times 12 \text{ sq cm} = 144 \text{ sq cm}$

Now, length of the floor =  $3.6 \text{ m}$

Breadth of the floor =  $2 \text{ m}$

$\therefore$  Area of the floor =  $3.6 \times 2 \text{ sq m} = 7.2 \text{ sq m}$

=  $72000 \text{ sq cm}$

$\therefore$  Number of tiles placed on the floor =  $\frac{\text{Area of the floor}}{\text{Area of one tile}}$

$$= \frac{72000}{144} = 500$$

So, number of tiles placed on the floor is 500.

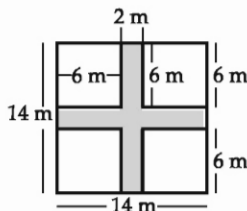
6. (a) Perimeter of the shaded portion

=  $(2 + 6 + 6 + 2 + 6 + 6 + 2 + 6 + 6 + 2 + 6 + 6) \text{ m}$

=  $56 \text{ m}$

Now, area of complete figure =  $14 \times 14 \text{ sq m}$

=  $196 \text{ sq m}$

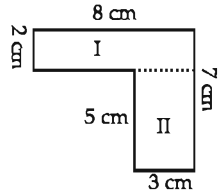


- $\therefore$  Area of unshaded figure =  $6 \times 6$  sq m = 36 sq m  
 $\therefore$  Area of 4 unshaded figures =  $4 \times 36$  sq m = 144 sq m  
 $\therefore$  Area of shaded figure =  $(196 - 144)$  sq m = 52 sq m.

(b) Perimeter of shaded portion =  $(8 + 7 + 3 + 5 + 5 + 2)$  cm  
 = 30 cm

Now, area of figure I =  $(8 \times 2)$  sq cm  
 = 16 sq cm

and area of figure II =  $(5 \times 3)$  sq cm  
 = 15 sq cm



$\therefore$  Area of shaded portion =  $(16 + 15)$  sq cm = 31 sq cm.

7. The total cost of flooring a room at ₹ 80.50 per sq m is ₹ 4830.

$\therefore$  Area of the floor =  $\frac{4830}{80.50}$  = 60 sq m

Also, length of the floor = 8 m

$\therefore$  Breadth =  $\frac{\text{Area}}{\text{Length}} = \frac{60}{8} = 7.5$  m

8. The length of the rectangular field = 32 m

Its breadth =  $\frac{1}{4} \times \text{length} = \frac{1}{4} \times 32$  m = 8 m

$\therefore$  Area = length  $\times$  breadth  
 =  $32 \times 8 = 256$  sq m

So, area of the field is 256 sq m.

9. Length of rectangle = 144 cm

Breadth of rectangle = 80 cm

$\therefore$  Area =  $144 \times 80$  sq cm  
 = 11520 sq cm = 1.152 sq m

So, area of the rectangle is 1.152 sq m.

10. Length of the rectangle = 70 m

Breadth of the rectangle = 56 m

$\therefore$  Perimeter =  $2(l + b) = 2(70 + 56)$  m  
 =  $2 \times 126$  m = 252 m

$$\therefore \text{Area of rectangle} = l \times b = 70 \times 56 \text{ sq m} = 3920 \text{ sq m}$$

Now, perimeter of square = perimeter of rectangle

$$4l = 252 \Rightarrow l = \frac{252}{4} = 63 \text{ m}$$

$$\text{So, area of the square} = 63 \times 63 \text{ sq m} = 3969 \text{ sq m}$$

$$\text{Difference in area} = (3969 - 3920) \text{ sq m} = 49 \text{ sq m}$$

So, square has 49 sq m more area than the rectangle.

11. Length of the swimming pool = 25 m

Its breadth = 10 m

Depth = 3 m

$$\therefore \text{Volume of water in the swimming pool} = (25 \times 10 \times 3) \text{ cu m}$$

$$= 750 \text{ cu m}$$

$$= 750000 \ell \quad [\because 1 \text{ cu m} = 1000 \ell]$$

So, 750000  $\ell$  of water is required to fill the swimming pool.

12. Length of rectangular tank = 3.5 m

Depth = 0.75 m

Volume = 4.2 cu m

$$\begin{aligned} \therefore \text{Width of the tank} &= \frac{\text{Volume}}{\text{length} \times \text{depth}} \\ &= \frac{4.2}{3.5 \times 0.75} \\ &= \frac{42 \times 100}{35 \times 75} = \frac{8}{5} = 1.6 \text{ m} \end{aligned}$$

So, width of the tank is 1.6 m.

13. (a)  $l = 15 \text{ cm}$ ,  $b = 12 \text{ cm}$ ,  $h = 7.5 \text{ cm}$

$$\begin{aligned} \therefore V &= l \times b \times h \\ &= (15 \times 12 \times 7.5) \text{ cu cm} \\ &= 1350 \text{ cu cm} \end{aligned}$$

(b)  $l = 4.5 \text{ m}$ ,  $b = 3.2 \text{ m}$ ,  $h = 2 \text{ m}$

$$\begin{aligned} \therefore V &= l \times b \times h \\ &= (4.5 \times 3.2 \times 2) \text{ cu m} \\ &= 28.80 \text{ cu m} \end{aligned}$$

14. Length of resulting cuboid =  $5 \times 4 \text{ cm} = 20 \text{ cm}$

Breadth =  $4 \text{ cm}$

Height =  $4 \text{ cm}$

$\therefore$  Volume of resulting cuboid =  $l \times b \times h$

=  $20 \times 4 \times 4 \text{ cu cm}$

=  $320 \text{ cu cm}$

15. Length of cubical box =  $120 \text{ cm}$

$\therefore$  Volume of cubical box =  $(120 \times 120 \times 120) \text{ cu cm}$

Also, volume of one cuboidal book =  $(20 \times 12 \times 6) \text{ cu cm}$

$\therefore$  Number of books required to fill in the cubical box

$$= \frac{\text{volume of cubical box}}{\text{volume of one cuboidal book}}$$

$$= \frac{120 \times 120 \times 120}{20 \times 12 \times 6} = 1200$$

So, 1200 books will be required to fill in the cubical box.

16. Length of water tank =  $4 \text{ m}$

Its breadth =  $1.5 \text{ m}$

and depth =  $1 \text{ m}$

$\therefore$  Volume =  $l \times b \times h = (4 \times 1.5 \times 1) \text{ cu m}$

=  $6 \text{ cu m}$

=  $6000 \ell$

So, the volume of water tank is  $6 \text{ cu m}$  or  $6000 \ell$ .

## HOTS

The only possible dimensions of a rectangular board are

length =  $6 \text{ units}$ ,

breadth =  $3 \text{ units}$

Perimeter =  $2(l + b) = 2(6 + 3) = 18 \text{ units}$ ,

Area =  $l \times b = 6 \times 3 = 18 \text{ sq units}$

So, the numerical values of perimeter and area of the rectangular board are equal.