MENSURATION

VOLUME OF CUBE, CUBOID AND CYLINDER

EXERCISE

Q.1 Find the volume and surface area of a cuboid of $\lambda = 10$ cm, $b = 8$ cm and $h = 6$ cm.

Q.2 How many matchboxes of size 4 cm × 3 cm × 1.5 cm can be packed in a cardboard box of size 30 cm × 30 cm × 20 cm?

Q.3 The dimensions of a cube are doubled. By how many times will its volume and surface area increase?

Q.4 A right circular cylinder has a height of 1 m and a radius of 35 cm. Find its volume, area of curved surface and total area.

Q.5 An open cylindrical tank is of radius 2.8m and height 3.5m. What is the capacity of the tank?

Q.6 A metal pipe 154 cm long, has an outer radius equal to 5.5 cm and an inner radius of 4.5 cm. what is the volume of metal used to make the pipe?

Q.7 A rectangular piece of paper of width 20 cm and length 44 cm is rolled along its width to form a cylinder. What is the volume of the cylinder so formed?

Q.8 Find the volume and surface area of a cuboid
16 m long, 14 m broad and 7 m high.

Q.9 The volume of a wall, 5 times as high as it is borad and 8 times as long as it is high, is 12.8 cu. metres. Find the breadth of the wall.

Q.10 Find the number of bricks, each measuring
24 cm × 12 cm × 8 cm, required to construct a wall 24 m long, 8 m high and 60 cm thick, if 10% of the wall is filled with mortar ?

ANSWER KEY

1. V = 480 cm^3 Surface area =376 cm^2

2. 1000

3. Volume increases eight times if the side is doubled. Surface area increases four times.

4. Volume = 0.385 m^3

Area of curved surface = 2.2 m^2

Total surface area = 2.97 m^2

5. Capacity= 86.24 m^3

6. Volume of metal = 4840 cm^2

7. Volume = 3080 cm^2

8. 868 m^2

9. 40 cm

10. 45000