

G.N. National Public School, Gorakhpur, G.K.P.

Class - IX MATHS Chapter - 13

Surface Areas and Volumes

Assignment Part-3

Q.1- The external diameter of an iron pipe is 25 cm and its length is 20 cm. If the thickness of the pipe is 1 cm, find the total surface area of the pipe.

Q.2- The sum of radius of the base and height of a cylinder is 37 m. If the total surface area of the cylinder is 1628 m^2 , find the curved surface area.

Q.3 How much cardboard is required to make 35 penholders in the shape of cylinders, each of radius 3 cm and height 10.5 cm?

Q.4 The radii of two cylinders are in the ratio 2:3 and their heights are in the ratio 5:3. Calculate the ratio of their ^{base} ~~surface~~ areas and the ratio of their curved surface.

Q.5- 30 circular plates, each of radius 14 cm and thickness 3 cm, are placed one above the other to form a ~~cylinder~~ cylindrical solid. Find the total surface area.

Q.6- There are 20 cylindrical pillars in a building, each having a diameter of 50 cm and height 4 m. Find the cost of cleaning them at Rs 14 per m^2 .

CT-13 Surface areas and Volumes Assignment Part-4

Q.7- The curved surface area of a cylinder is 4400cm^2 and the circumference of its base is 110cm . Find the height and radius of the cylinder.

Q.8- The total surface area of a cylinder is 462cm^2 . Its curved surface area is one third of its total surface area. Find radius and height of the cylinder.

Q.9- A rectangular sheet of paper $30\text{cm} \times 18\text{cm}$ can be transformed into the curved surface of a right circular cylinder in two ways namely, either by rolling the paper along its length or by ~~rolling~~ rolling it along its breadth. Find the ratio of the curved surface area of the two cylinders, thus formed.

Q.10- It costs Rs 3300 to paint the inner curved surface of a cylindrical vessel 10m deep at the rate of Rs 30 per m^2 . Find the

- (i) inner curved surface area of the vessel.
- (ii) inner radius of the base.