

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

Class - IX MATHS Chapter-13 Surface Areas and Volumes
Assignment Part-II

Q.1- The radius and the height of a right circular cone are in the ratio of 5:12 and its volume is 2512 cm^3 . Find the curved surface area and the total surface area of the cone. (Use $\pi = 3.14$)

Q.2- A corn cob, ~~shaped~~ shaped somewhat like a cone, has the radius of its broadest end as 2.1 cm and length as 20 cm. If each 1 cm^2 of the surface of the cob carries an average of four grains, find how many grains you would find on the entire cob.

Q.3- A semicircular sheet of diameter 28 cm is bent to form an open conical cup. Find the capacity of the cup. (Use $\sqrt{3} = 1.732$)

Q.4- A cylinder lies within a cube touching all its vertical faces and a cone lies inside the cylinder. If their heights are same with the same base, find the ratio of their volumes.

Q.5- Find the volume of the largest right circular cone that can be cut out of a cube whose edge is 21 cm.

Ch-13 Surface Areas and Volumes Assignment Part-12

Q.6- The height of a cone is 30 cm. A small cone is cut off at the top by a plane parallel to the base. If its volume be $\frac{1}{27}$ of the volume of the given cone, at what height above the base, the section has been made?

Q.7- A circus tent is cylindrical to a height of 3 metres and conical above it. If its diameter is 105 m and the slant height of the conical portion is 53 m, calculate the length of the canvas 5 m wide to make the required tent.

Q.8- An iron pillar consists of a cylindrical portion 2.8 m high and 20 cm in diameter and a cone 42 cm high is surmounting it. Find the weight of the pillar, given that 1 cm^3 of iron ~~weight~~ weighs 7.5 g.

Q.9- From a solid right circular cylinder with height 10 cm and radius of the base 6 cm, a right circular cone of the same height and base is removed. Find the volume of the remaining solid. (Take $\pi = 3.14$)

Q.10- Water flows at the rate of 10 metres per minute through a cylindrical pipe 5 mm in diameter. How long would it take to fill a conical vessel whose diameter at the surface is 40 cm and depth 24 cm?