

MATHEMATICS WORKSHEET
SURFACE AREA AND VOLUME GRADE 9

1. The radius and the slant height of a cone is in the ratio 5:13.If its curved surface area is 40040 sqcm.Find its height and TSA. (Heights 168cm).
2. The circumference of the base of 9m high conical tent is 24π m. Find its CSA.(180π sqcm)
3. CSA of a cone is 4950 sqcm, if the diameter of its base is 42cm. Find its slant height, TSA and height. (75cm,6336sqcm, 72cm)
4. Find the length of the canvas 2m in width, required to make conical tent 12m in diameter and 63m in slant height. Also find the cost of the canvas at rate of Rs 35 per meter.(594m ,Rs 20790)
5. The diameter and the slant height of a cone are in the ratio 8:7.Find its slant height if its CSA is 3168 sqm.(42m)
6. The hollow sphere in which the circus motor cyclist performs his stunts has a diameter of 7m.Find the area available to the motor cyclist for driving.(154sqm)
7. The roof a circular room is hemispherical in shape with its inner circumference 35.2m.Find the radius of the roof and cost of polishing the room at a rate of Rs 2 per 100 sqcm. (5.6m and RS 39424)
8. The circumference of the flat circular surface of a hemisphere is 330cm.Find it's TSA. (25987.5sqcm)
9. Find the radius of the sphere whose area is 1386 sqcm. (10.5cm)
10. The radius of spherical balloon decreases from 20cm to 15cm as air is being pumped out of it. Find the ratio of the surface area of the balloons and the percentage of decrease in the surface area.(16:9, 43.75%)
11. a conical vessel has base radius 84cm and height 150cm.fid in liters' in volume(1108.8L)
12. the height of a cone is 21cm and its volume is 1408cm^3 .find the diameter of the base of the cone.(16cm)
13. a solid cone with base radius 10cm and height 16cm is melted and recasted into another solid cone of diameter 10cm find the height of this cone(64cm)
14. the height and slant height of a cone are 42cm and 56cm respectively. find the value of the cone(60368cm^3)
15. a conical vessel with radius 20cm and height 30cm is full of water, this water is transferred into a cylindrical vessel of radius 8cm.find upto what height will the cylindrical vessel fill.(62.5cm)
16. find the volume of a sphere whose surface area is 55.44sqcm .(38.808cm^3)
- 17.a solid sphere of radius 4cm is melted an recasted into small identical solid spheres each with diameter 1cm.find the number of small spheres obtained.(512)
18. find the volume of a solid hemisphere of diameter 35cm.(11229.17cm^3)
- 19.a hemispherical bowl of internal diameter 72cm is full of water, this water is the be filled in cylindrical bottles diameter 6cm and height 6cm.how man bottles are required.(576)
- 20 a solid iron ball of radius 7cm is melted an drawn into a wire of radius 0.1cm.find the length of the wire obtained .(hint :assume the length of the wire as h cm.volume

of wire= volume of wall and wire will be in the shape of the cylinder.)(ans:45733.3cm