



INDIAN SCHOOL AL WADI AL KABIR

DEPT. OF MATHEMATICS 2019 - 2020

Class IX – CIRCLES , S.A & Volume **Date: 27-01-2020**

1.	Find the length of the longest pole that can be put in a room of dimensions 10 m x 10 m x 5 m.	
2.	If the radius of new sphere is half of the radius of given sphere, find out ratio of volume of new sphere to that of volume of given sphere.	
3.	In the given figure, $\angle SPQ = 45^\circ$, $\angle POT = 150^\circ$ and O is the centre of circle. Find the measures of $\angle RQT$, $\angle RTQ$ and $\angle PUT$.	
4.	A circle passes through A, B, C and D as shown in the figure. If $\angle BAD = 63^\circ$, find x .	
5.		In the given figure, a straight line l passing through the centre O of the circle bisects the chords AB and CD. Prove that $AB \parallel CD$.
6.	AB and CD are two parallel chords of a circle such that lengths of AB and CD are 10 cm and 24 cm respectively. If the chords are on opposite sides of the centre and the distance between them is 17 cm, find the radius of the circle.	
7.	Find the capacity in litres of a conical vessel having height 8 cm and slant height 10 cm.	
8.	The diameter of garden roller is 1.4 m and it is 2 m long. How much area will it cover in 15 revolutions .	

9.	The dimensions of a room are 6 m x 5 m x 2 m. Calculate the cost of white washing the walls and the ceiling at the rate of Rs. 6.50 per m ² .
10.	The diameter of the moon is approximately one-fourth of the diameter of earth. Compare their volumes and curved surface areas.
11.	A fruit tin has a square base with side 14 cm and height 18.5 cm. Another cylindrical tin has a diameter of the base 14 cm and height 17.5 cm. Which tin has more capacity and by how much ?
12.	The dome of a building where people live is in the shape of a hemisphere of radius 7 m. Eleven children decided to help the old aged people by collecting money for white washing the dome. If white washing costs ₹ 2 per square meter, how much would each children pay ? Also find volume of air inside the dome ?
13.	A village has a population of 4000 people. 60 litres of water is required per person per day. The village tanker of water is cuboidal in shape with dimensions 48 m x 27 m x 5 m which is completely filled with water. For how many days the water of this is sufficient?
14.	A hemispherical bowl is made of 0.2 cm thick steel. The inner diameter of the bowl is 8 cm. Find the outer curved surface area of the bowl. Also find the cost of polishing its outer surface at the rate of Rs 2 per cm ²
15.	With the help of a ruler and a compass, it is possible to construct an angle of: (A) 35° (B) 40° (C) 37.5° (D) 47.5°
16.	Draw an angle of 110° with the help of a protractor and bisect it. Measure each angle.
17.	Draw a line segment of 10 cm. Divide it into four equal parts. Write the measure of each part.
18.	Construct a triangle ABC in which BC = 5 cm, ∠B = 60° and AC + AB = 7.5 cm.
19.	Construct a triangle PQR given that QR = 3cm, ∠PQR = 45° and QP – PR = 2 cm.
20.	Construct a triangle ABC in which ∠B = 60° , ∠C = 30° and AC + AB +BC = 11 cm.