BCM School, Basant Avenue, Dugri Road, Ludhiana Class - IX

Maths Assignment

Surface Area And Volume

Q1 The radius of a hemispherical balloon increases from 6 cm to 12 cm as air is be	ing
pumped into it. The ratio of the surface areas of the balloon in the two cases is	

- (a) 1:4.
- (b) 1:3. (c) 2:3.
- (d) 2:1

Q2 A cone is 8.4 cm high and the radius of its base is 2.1 cm. It is melted and recast into a sphere. The radius of the sphere is

- (a) 4.2 cm
- (b) 2.1 cm
- (c) 2.4 cm
- (d) 1.6 cm

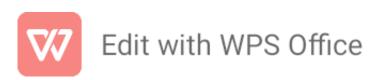
Q3 The total surface area of a cone whose radius is r/2 and slant height 2l is

- (a) 2πr (l+r)
- (b) $\pi r (l+(r/4))$ (c) $\pi r (l+r)$
- (d) 2πrl

Q4 Assertion: if r be the radius and h be the height of cone then the slant height = $\sqrt{(h^2+r^2)}$

Reason: if the height of cone is 24 cm and diameter of base is 14cm then the slant height of cone is 15 cm

- a) both Assertion and reason are correct and reason is correct explanation for Assertion
- b) both Assertion and reason are correct but reason is not correct explanation for Assertion
- c) Assertion is correct but reason is false
- d) both Assertions and reason are false
- Q5 The volume of a solid hemisphere is $1152\,\pi\,\text{cm}^3$. Find its curved surface area.
- Q6 A metallic sphere of radius 10.5 cm is melted and thus recast into small cones, each of radius 3.5cm and height 3cm. Find how many cones are obtained.
- Q7 The volume of two hemisphere are in the ratio 27:125. Find the ratio of their radii.
- Q8. Teacher said to the students of class 9 by showing the given figure, in this monument



one can find combination of solid figures. There are two domes at the corners which are hemispherical in shape, main entrance is a rectangle in shape with semicircle at upper end.

- i) Write the formula for total surface area of a hemisphere.
- ii) How much is the volume of two domes, if diameter of its base is 7m.
- iii) Find the volume of two bushes in the left of the front garden, if radius of upper end is 42cm and height 100 cm.