



ST. LAWRENCE HIGH SCHOOL



A Christian Jesuit minority Institution

Subject: Mathematics

Class: X

Date:18.04.2020

Worksheet-11

Chapter- Sphere

Topic - Whole surface area and volume of a sphere

1. Choose the correct alternative. 1x15=15
- a) Volume of a sphere with radius 4 cm is i) 269.19 cubic cm ii) 268.19 cubic cm iii) 219.68 sq cm iv) none of these
 - b) Volume of a sphere with 10m diameter is i) 523.599 cubic m ii) 599.523 cubic m iii) 325.599 cubic m iv) none of these
 - c) Ratio of curved surface area of 2 spheres is 16:9. Then ratio of their volume is i) 64/27 ii) 27/64 iii) 16/9 iv) none of these
 - d) If the numerical value of curved surface area and 3 times the volume of the sphere are same. Then radius is i) 2 units ii) 3 units iii) 1 unit iv) none of these
 - e) Volume of a sphere with 2r unit radius is i) $\frac{32}{4} \Pi r^3$ cubic unit ii) $\frac{32}{3} \Pi r^2$ sq unit iii) $\frac{32}{3} \Pi r^3$ cubic unit iv) none of these
 - f) If radius of a sphere becomes twice then volume will become i) 8 times the old volume ii) 3 times the old volume iii) 2 times the old volume
 - g) If ratio of volume of 2 spheres is 1:8, then ratio of curved surface area is i) 4:1 ii) 1:4 iii) 1:8 iv) none of these
 - h) If whole surface area of a sphere is 2464 sq m. Then diameter of the sphere is i) 14 m ii) 28 m iii) 28 cm iv) none of these
 - i) How much leather is needed to make a ball with 42 cm diameter i) 5544 sq cm ii) 4455 sq cm iii) 5544 cubic cm iv) none of these
 - j) If a ball with 28 cm diameter is fully immersed in a pot full of water, amount of water flown out of the pot is i) 11499.67 cubic cm ii) 11498.67 cubic cm iii) 11498.67 sq cm iv) none of these
 - k) Whole surface area of a sphere with 10.5 cm radius is i) 3186 sq cm ii) 3186 cubic cm iii) 1386 sq cm iv) none of these
 - l) After melting 3 spheres with radius 3cm, 4 cm and 5 cm respectively a big sphere is formed. The length of the radius of the big sphere is i) 6 cm ii) 8 cm iii) 9 cm iv) none of these
 - m) Radius of a balloon expanded from 7 cm to 21 cm. Ratio of the whole surface area of these 2 states is i) 9:1 ii) 1:8 iii) 1:9 iv) none of these

n) A copper sphere with 14 cm diameter is melted and a number of new spheres with 3.5 cm radius are formed. The number of new spheres are i) 64 ii) 46 iii) 32 iv) none of these

o) A sphere with 8 cm radius is melted and a number of new spheres with 1 cm radius are formed. Number of new spheres that can be formed is i) 514 ii) 512 iii) 215 iv) none of these

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