



ST. LAWRENCE HIGH SCHOOL



A Jesuit Christian minority Institution

Subject: Mathematics

Class- X

Date: 01/02/2021

Answer key of Worksheet-5

Chapter: Cuboid

Topic- Surface area and volume

1. Choose the correct alternative.

$$1 \times 15 = 15$$

a) The dimension of a cuboid are 12 cm, 6 cm and 3 cm respectively. Calculate the length of each edge of a cube whose volume is equal to that cuboid.

i) 5 cm ii) 6 cm iii) 8 cm iv) 4 cm

b) If the area of one surface of cube be 4 times more than that of another cube, then how many times will be the volume of the first cube than that of the second cube. i) volume of 1st cube = 8 x volume of 2nd cube ii) volume of 2nd cube = 8 x volume of 1st cube iii) volume of 1st cube = 6 x volume of 2nd cube iv) none of these

c) If the sum of areas of 6 surfaces of a cube be 216 sq cm. Find out volume of the cube.

i) 432 cc ii) 216 cc iii) 64 cc iv) none of these

d) The volume of a rectangular parallelepiped is 432 sq cm. If it is converted into two cubes of equal volume, then calculate the length of each edge of each cube.

i) 6 cm ii) 4 cm iii) 7 cm iv) none of these

e) If each side of a cube is reduced by 50%. calculate the ratio of the original cube and changed cube.

i) 1:8 ii) 4:1 iii) 8:1 iv) none of these

f) If the ratio of length, breadth and height of a cuboidal box is 3:2:1 and its volume is 384 cc. Calculate the total surface area of the box.

- i) 352 sq cm ii) 352 sq m iii) 354 sq cm iv) none of these
- g) If the area of the inner base of a cuboidal box is 88 sq cm and volume is 440 cc. Find out height of the box .
 i) 6 cm ii) 5 cm iii) 8 cm iv) 9 cm
- h) The length, breadth and height of a cuboidal hole are 40 m, 12 m and 16 m respectively. Find out the number of planks having the height of 5 m, breadth of 4 m and the thickness of 2 m can be kept in that hole.
 i) 192 ii) 200 iii) 190 iv) 182
- i) The ratio of the volume of 2 cubes is 1: 27, the ratio of total surface areas of two cubes is i) 1:9 ii) 9:1 iii) 2:9 iv) 1: 27
- j) If each edge of a cube is increased by 50% then how much the total surface area of the cube will be increased?
 i) 150% ii) 125% iii) 100% iv) 75%
- k) The lengths of edges of 3 solid cubes are 3 cm, 4 cm and 5 cm respectively, a new solid is made by melting these solid cubes, Calculate the edge of the new cube .
 i) 6 cm ii) 8 cm iii) 10 cm iv) 5 cm
- l) The length, breadth and height of a cuboidal shape room are 5 m, 4 m and 3 m respectively. Find length of the longest rod that can be kept in the room.
 i) $2\sqrt{5}$ m ii) $5\sqrt{3}$ m iii) $5\sqrt{2}$ m iv) 5 m
- m) The sum of the length of the edge of a cube is 60 cm, calculate volume of the cube.
 i) 125 cc ii) 150 cc iii) 225 cc iv) none of these
- n) If the length of the diagonal of a cube is $4\sqrt{3}$ cm calculate the total surface area of the cub.
 i) 116 sq cm ii) 96 cc iii) 96 sq cm iv) none of these
- o) The length, breadth and weight of a brass plate with squared base are x cm, 1 mm and 4725 gm respectively, if the weight of 1 cc brass is 8.4 gm, find out the value of x.
 i) 75 cm ii) 75 mm iii) 85 cm iv) 95 cm

Aparajita Mondal