



# ST. LAWRENCE HIGH SCHOOL



## A Jesuit Christian minority Institution

Subject: Mathematics Class-X

Date: 01/02/2021

### Worksheet-5

### Chapter: Cuboid

### Topic- Surface area and volume

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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 1<sup>st</sup> cube = 8 x volume of 2<sup>nd</sup> cube    ii) volume of 2<sup>nd</sup> cube = 8 x volume of 1<sup>st</sup> cube    iii) volume of 1<sup>st</sup> cube = 6 x volume of 2<sup>nd</sup> 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

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