



ST. LAWRENCE HIGH SCHOOL



A Jesuit Christian minority Institution

Subject: Mathematics

Class- X

Date: 22/02/2021

Topic: Right Circular Cylinder

Worksheet-10

Full marks -15

1. Choose the correct alternative.

1x15=15

a) The length of diameter of a drum made of steel covered with lid is 28 cm, if 2816 sq cm steel sheet is required to make the drum, write by calculating the height of the drum.

i) 18 cm ii) 26 cm iii) 24 cm iv) 14 cm

b) calculate how many cubic decimetres of concrete material will be necessary to construct two cylindrical pillars, each of whose diameter is 5.6 decimeter and height is 2.5 meter.

i) 1332 cu dcm ii) 1223 cu dcm iii) 1232 cu dcm
iv) 1300 cu dcm

c) If a gas cylinder for fuel purpose having the length of 7.5 dcm and the length of inner diameter of 2.8 dcm carries 15.015 kg of gas, calculate the weight of the gas of per cubic dcm.

i) 352 gm ii) 325 gm iii) 350 gm iv) none of these

d) If a pump set with a pipe of 14 cm diameter can drain 2500 metre water per minute, calculate how much kilolitre water that pump will drain per hour?

i) 2310 kilolitre ii) 1230 kilolitre iii) 3210 kilolitre iv) none of these

e) There are some water in a long gas jar of 7 cm diameter. If a solid right circular cylindrical pipe of iron having 5 cm length and 5.6 cm diameter be immersed completely in that water, let us write by calculating how much the level of water will rise.

i) 3.2 cm ii) 2.3 cm iii) 2 cm iv) 2.4 cm

f) If the surface area of a right circular cylindrical pillar is 264 sq metre volume is 92 cubic metre, height and length of the diameter of the pillar are respectively

i) 6 m and 12 m ii) 6 m and 10 m iii) 7 m and 14 m iv) 6 m and 14 m

g) A right circular cylindrical tank of 9 m height is filled with water. Water comes out from there through a pipe having length of 6 cm diameter with a speed of 225 metre per minute and tank becomes empty after 2 hrs 24 mins. Calculate diameter of the tank.

i) 1.8 m ii) 2.8 m iii) 0.9 m iv) 1.5 m

h) Curved surface area of right circular cylindrical log of wood of uniform density is 440 sq dcm. If 1 cu dcm wood weighs 1.5 kg and weight of the log is 9.24 quintals.

The length of the diameter of the log and its height are respectively

i) 5.6 dcm and 25 dcm ii) 2.8 dcm and 25 dcm iii) 5.6 dcm and 2 dcm

iv) none of these

i) The lengths of inner and outer diameter of a right circular cylindrical pipe open at 2 ends are 30 cm and 26 cm respectively and length of the pipe is 14.7 m. Calculate the cost of painting its all surfaces with coal tar at Rs 2.25 per dcm.

i) Rs 5289.21 ii) Rs 5892 iii) Rs 5829.12 iv) none of these

j) The lengths of outer and inner diameter of a hollow right circular cylinder are 16 cm and 12 cm respectively. Height of the cylinder is 36 cm. How many solid cylinders of 2 cm diameter and 6 cm height may be obtained by melting this cylinder.

i) 168 ii) 68 iii) 186 iv) 86

k) The longest rod that can be kept in a right circular cylinder having the diameter of 3 cm and height of 4 cm, then the length of the rod is_____

i) 8 cm ii) 5 cm iii) 10 cm iv) 9 cm

l) If the numerical values of volume and lateral surface area of a right circular cylinder are equal then the length of the diameter is ____.

i) 6cm ii) 8 cm iii) 10 cm iv) 4 cm

m) If the lateral surface area of a right circular cylinder is c square units, length of radius of base is r units and volume v cubic units, find the value of cr/v

i) 2 ii) 3 iii) 4 iv) 6

n) If the heights of 2 right circular cylinders are in the ratio 1:2 and perimeters are in the ratio of 3:4 .calculate the ratio of their volumes.

i) 3:9 ii) 9:32 iii) 32:9 iv) none of these

o) If the height of a right circular cylinder is 14 cm and lateral surface area is 264 sq cm. calculate the volume of the cylinder.

i) 639 cu cm ii) 369 cu cm iii) 396 cu cm iv) none of these

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