



### Guess Paper: Maths Class 10 Chapter 13. Surface Areas and Volumes

1. A solid metallic hemisphere of radius 8 cm is melted and recasted into a right circular cone of base radius 6 cm. Determine the height of the cone.
2. A rectangular water tank of base  $11\text{ m} \times 6\text{ m}$  contains water upto a height of 5 m. If the water in the tank is transferred to a cylindrical tank of radius 3.5 m, find the height of the water level in the tank.
3. How many cubic centimetres of iron is required to construct an open box whose external dimensions are 36 cm, 25 cm and 16.5 cm provided the thickness of the iron is 1.5 cm. If one cubic cm of iron weighs 7.5 g, find the weight of the box.
4. The barrel of a fountain pen, cylindrical in shape, is 7 cm long and 5 mm in diameter. A full barrel of ink in the pen is used up on writing 3300 words on an average. How many words can be written in a bottle of ink containing one fifth of a litre?
5. Water flows at the rate of 10m/minute through a cylindrical pipe 5 mm in diameter. How long would it take to fill a conical vessel whose diameter at the base is 40 cm and depth 24 cm?
6. A heap of rice is in the form of a cone of diameter 9 m and height 3.5 m. Find the volume of the rice. How much canvas cloth is required to just cover the heap?
7. A factory manufactures 120000 pencils daily. The pencils are cylindrical in shape each of length 25 cm and circumference of base as 1.5 cm. Determine the cost of colouring the curved surfaces of the pencils manufactured in one day at Rs 0.05 per  $\text{dm}^2$ .
8. Water is flowing at the rate of 15 km/h through a pipe of diameter 14 cm into a cuboidal pond which is 50 m long and 44 m wide. In what time will the level of water in pond rise by 21 cm?
9. A solid iron cuboidal block of dimensions  $4.4\text{ m} \times 2.6\text{ m} \times 1\text{ m}$  is recast into a hollow cylindrical pipe of internal radius 30 cm and thickness 5 cm. Find the length of the pipe.
10. 500 persons are taking a dip into a cuboidal pond which is 80 m long and 50 m broad. What is the rise of water level in the pond, if the average displacement of the water by a person is  $0.04\text{ m}^3$ ?

### Answer:

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|----------------------|---|-------------------------|------------|-----------------|
| 1. 28.44 cm          | 2. 8.6 m                                  | 3. $3960\text{ cm}^3$ , | 29.7 kg    | 4. 480000 words |
| 5. 51 minutes 12 sec | 6. $4.25\text{ m}^3$ , $80.61\text{ m}^2$ | 7. Rs 2250              | 8. 2 hours |                 |
| 9. 112 m             | 10. 0.5 cm                                |                         |            |                 |