1. A square of side 60m and a rectangular field of length 80m have the same perimeter. Which field has a larger area?

2. The shape of a garden is rectangular in the middle and semi circular at the ends as shown in the diagram. Find the area and the perimeter of this garden [Length of rectangle is 20 - (3.5 + 3.5) metres].



3. Find the area of a rhombus whose side is 6 cm and whose altitude is 4 cm. If one of its diagonals is 8 cm long, find the length of the other diagonal.

4. A suitcase with measures 80 cm  $\times$  48 cm  $\times$  24 cm is to be covered with a tarpaulin cloth. How many metres of tarpaulin of width 96 cm is required to cover 100 such suitcases?

5. A road roller takes 750 complete revolutions to move once over to level a road. Find the area of the road if the diameter of a road roller is 84 cm and length is 1 m.

6. Water is pouring into a cubiodal reservoir at the rate of 60 litres per minute. If the volume of reservoir is 108 m<sup>3</sup>, find the number of hours it will take to fill the reservoir.

7. If each edge of a cube is doubled,

(i) How many times will its surface area increase? (ii) How many times will its volume increase?

8. What is the perimeter and area of a semicircle whose radius is 14 cm.

9. A copper wire is in the form of a circle with radius 35 cm. It is bent into a square. Determine the side of the square.

10. A 14 m wide athletic track consists of two straight sections each 120 m long joined by semi-circular ends with inner radius is 35 m. calculate the area of the track.



11. Three cubes each of side 8 cm are joined end to end. Find the surface area of the resulting cuboids. 10. The areas of three adjacent faces of a cuboids are a, b and c. It its volume is V, prove that  $V^2$  = abc.

11. A river 10 meters deep and 100 meters wide is flowing at the rate of 4.5 km an hour. Find how many cubic meter of water runs into the sea per second.

12. A field is 600 m long and 50 m broad. A tank 30 m long, 20 m broad and 12 m deep is dug in the field. The earth taken out of it is spread evenly over the field. Find the height of the field raised by it. 13. The diameter of a roller 1 m long is 70 cm. If it takes 200 revolutions to level a playground, find the cost of leveling at the rate of 75 paise per sq m.

14. A field is 150 m long and 70 m broad. A circular tank of radius 5.6 m and depth 20 cm is dug in the field and the earth taken out of it is spread evenly over the field. Find the height of the field raised by it. 15. The radii of two cylinders are in the ratio 3 : 2 and their heights are in the ratio 7 : 4. Calculate the ratios of their volumes and of the cured surface areas.

16. The diameter of a garden roller is 2.8 m and it is 1.5 m long. How much area will it cover in 100 revolutions?

17. A well, with 10 meters inside diameter, is dug 14 meters deep. Earth taken out of it has been spread all-around it to a width of 5 meters to form an embankment. Find the height of the embankment.

18. A rectangular piece of paper 33 cm long and 16 cm wide is rolled along its breadth to get a cylinder of height 16 cm. Find the volume of the cylinder.

19. If the radius of a sphere is tripled, what is the ratio of the volume of original sphere to that of the second?

20. A cone, a hemisphere and a cylinder stand on equal bases and have same height. Show that their volumes are in the ratio 1: 2: 3

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