Chapter 12 - Areas Related to Circles

Question-1

Four equal circles are described about the four corners of a square so that each touches two of the others. The shaded area enclosed between the circles being 24/7 sq. cm, find the radius of the circles. [Use $= \frac{22}{7}$].

Question-2

A boy is cycling such that the wheels of the cycle are making 140 revolutions per minute. If the diameter of the wheel is 60 cm, calculate the speed per hour with which the boy is cycling.

Question-3

The square water tank has its sides equal to 40 m. There are four semi-circular grassy plots all round it. Find the cost of surfing the plots at Rs.1.25 per sq.m. (Use p = 3.14).

Question-4

The circumference of a circular park is 314 m. A 20 m. wide concrete track runs round it. Calculate the cost of laying turf in the park at `1.25 per sq.m. and the cost of concrete track at `1.25 per sq. m.

Question-5

The diameter of a cycle wheel is 70 cm. Find how many times the wheel will revolve in order to cover a distance of 110 m.

Question-6

An ox in a kolhu (an oil pressing apparatus) is tethered to a rope 3 m long. How much distance does it cover in 14 rounds?

Question-7

A horse is tied to a pole fixed at one corner of a 30 m × 30 m square field of grass, by means of a 10 m long rope (figure).
[Take $\pi = 3.14$.]

(i) Find the area of that part of the field in which the horse can graze.

(ii) Find the increase in the grazing area if the rope were 20 m long instead of being 10 m long.

Question-8

The radius of a circle is doubled. What is the ratio of the areas of the new circle to the area of the given circle?