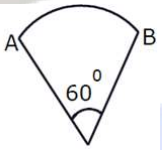
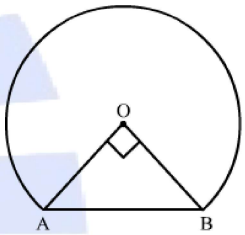
1. A piece of wire 22cm long is bent into the form of an arc of a circle subtending an angle of 60° at its centre. Find the radius of the circle [Use $\pi = 22/7$]

2. An arc subtends an angle of 90° at the centre of the circle of radius 14cm . Write the area of minor sector thus formed in terms of π.

3. If the adjoining figure is a sector of a circle of radius 10.5 cm, what is the perimeter of the sector? (Take $\pi = 22/7$)



4. Figure, shows the cross-section of railway tunnel. The radius O A of the circular part is 2m . If $\angle AOB = 90^\circ$, calculate:



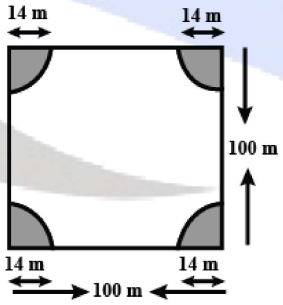
(i) the height of the tunnel

(ii) the perimeter of the cross-section

(iii) the area of the cross-section.

5. A horse is placed for grazing inside a rectangular field 70m by 52m and is tethered to one corner by a rope 21m long. On how much area can it graze?

6. A square park has each side of 100 m. At each corner of the park, there is a flower bed in the form of a quadrant of radius 14 m as shown in figure. Find the area of the remaining part of the park (Use π = 22/7).



7. A chord of a circle of radius 20cm subtends an angle of 90° at the centre. Find the area of the corresponding major segment of the circle. (Use $\pi = 3.14$)

8. The length of minute hand of a clock is $5cm$. Find the area swept by the minute hand during the (1) time period 6:05 amd and 6:40 am.

9. The central angles of two sectors of circles of radii $7cm$ and $21cm$ are respectively 120° and 40°. Find the areas of the two sectors as well as the length of the corresponding arcs. What do you observe?

10. Find the difference of the areas of a sector of angle 120° and its corresponding major sector of a circle of radius 21 cm.