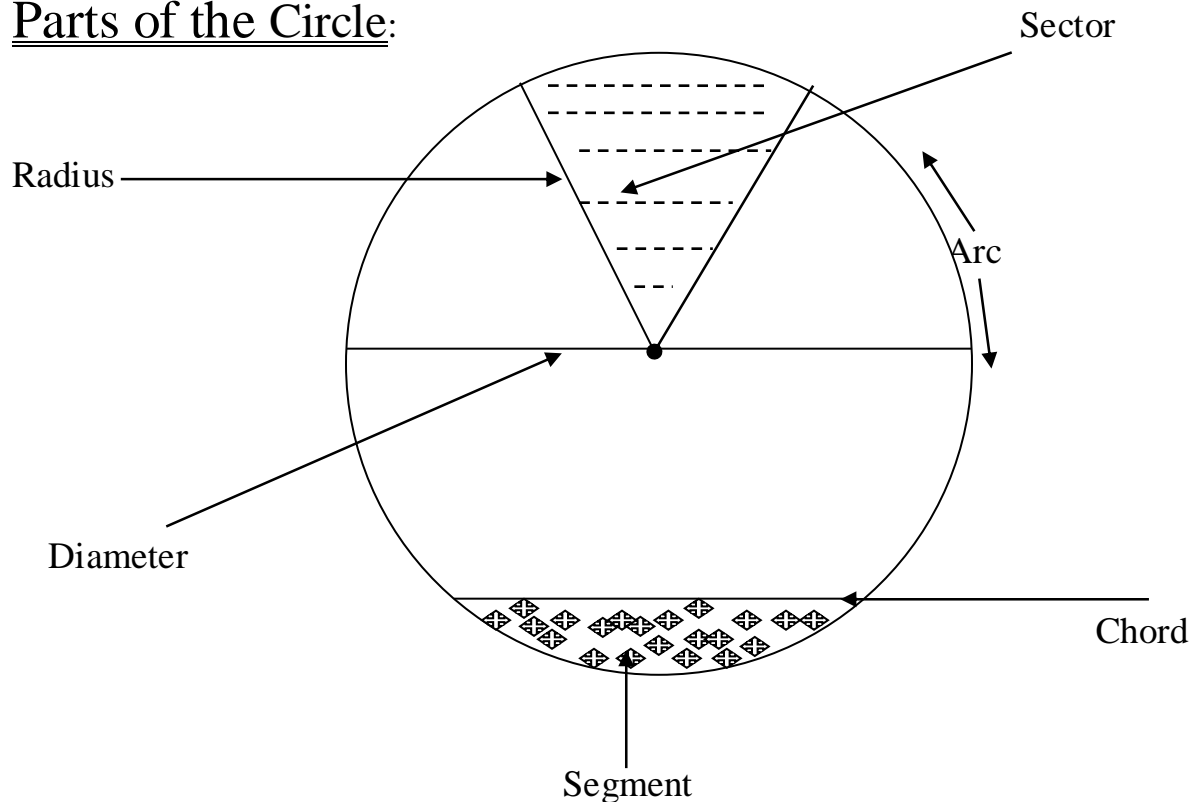


CHAPTER TEN

THE CIRCLE

Parts of the Circle:



These parts are:

(1) **The circumference:**

- This is the distance around the circle.

(2) **The Radius:**

- This is a line which is drawn from the centre, to a point on the circumference.

(3) **The chord:**

- This is the line which joins two points on the circumference.

(4) **The sector:**

- This is the region between two radii.

- The plural of radius is radii.

(5) **Segment:**

- This is the region between the chord and any part of the circumference.

(6) **Diameter:**

- This is a line which joins two points on the circumference, and passes through the centre.

(7) **The arc:**

- This refers to any part of the circumference.

N/B:

- For a circle, $D = 2r$, where D = the diameter and r = the radius.
- This means that if the radius is multiplied by 2, we get the diameter.
- Also when the diameter is divided by 2, we shall get the radius.

(Q1) The radius of a circle is given as 4cm. Find the diameter of the circle.

Soln:

$$D = 2r$$

$$\Rightarrow D = 2(4) \Rightarrow D = 8$$

$$\Rightarrow \text{The diameter} = 8\text{cm.}$$

(Q2) A circle has a radius of 3cm. find its diameter.

Soln:

$$\text{From } D = 2r \Rightarrow D = 2(3) = 6.$$

$$\Rightarrow \text{The diameter} = 6\text{cm.}$$

(Q3) A circle has a diameter of 12mm. Find its radius.

Soln:

$$r = \frac{D}{2} \Rightarrow r = \frac{12}{2} = 6$$

$$\Rightarrow \text{the radius} = 6\text{mm.}$$

N/B: For a circle, $C = 2\pi r$, where C = circumference, r = the radius and $\pi = \frac{22}{7}$ or 3.14.