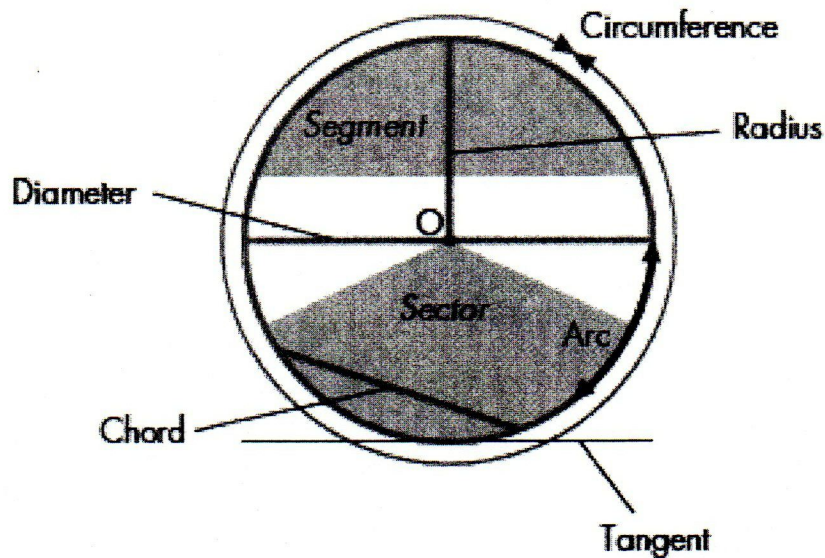


Circles



O: O is the centre of the circle.

Diameter: The 'width' of a circle. Any diameter passes through O. The line joining the two points of a circle which passes through the centre of the circle.

Radius: The distance from O to the edge of a circle.
The length of the diameter is twice the length of the radius.

Circumference: The perimeter of a circle.

Chord: A line joining two points on the circumference.

Tangent: A line that touches the circumference at one point only.

Arc: A part of the circumference of a circle.

Sector: A part of the area of a circle, lying between two radii and an arc.

Segment A part of the area of a circle, lying between a chord and an arc.

The **Area** of the circle is given by πr^2

The **Circumference** of the circle is given by $2\pi r$

Where the value of π is 3.14 or $\frac{22}{7}$

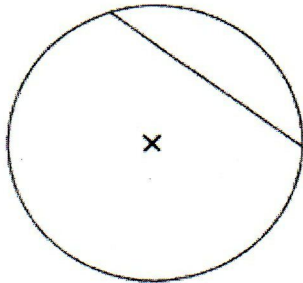
Note : Learn all these properties of circle.

Exercise :

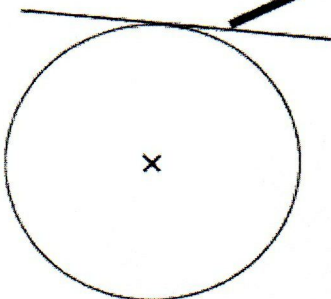
1) Here are 5 diagrams and 5 labels. In each diagram the centre of the circle is marked with a cross (×). Match each diagram to its label.

Diagram

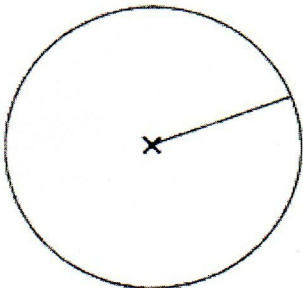
Label



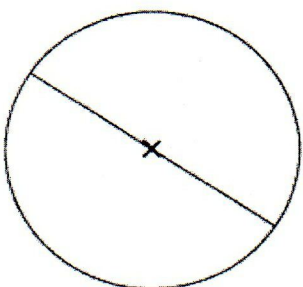
Circle and
tangent



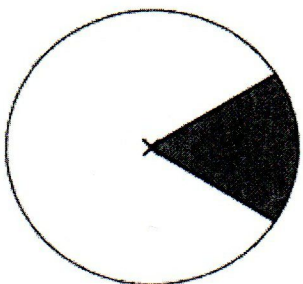
Circle and
radius



Circle and
chord

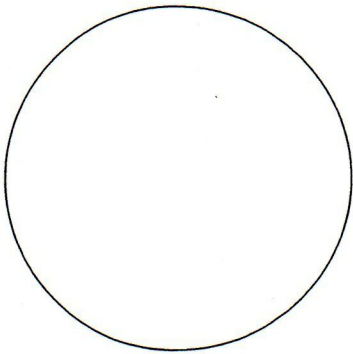


Circle and
sector

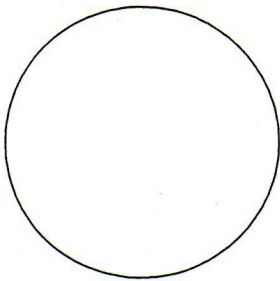


Circle and
diameter

2) In the circle, draw a diameter.



3) In the circle draw the tangent and cord.



4) Define the following terms.

a) Sector

b) Segment

5) Draw the circle having radius 5cm

1) Find the area and the circumference of a circle having

a) Radius : 12 cm Area= _____, Circumference = _____

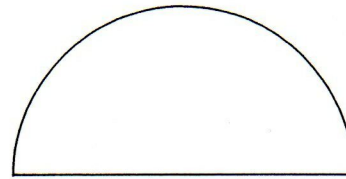
b) Radius : 4.5 cm Area= _____, Circumference = _____

c) Radius : 7 cm Area= _____, Circumference = _____

d) Diameter : 12 cm Area= _____, Circumference = _____

e) Diameter : 3 m Area= _____, Circumference = _____

2) Here is a tile in the shape of a semicircle.
The diameter of the semicircle is 8 cm.
Work out the perimeter of the tile.
Give your answer correct to 2 decimal places.



Diameter = 8 cm

3) Find the Area of the tile.

4) Find the area of the semicircle having the diameter 9 cm.

5) Find the perimeter of the semicircle in which the radius is 5 cm.

6) Find the area of the semicircle having the radius of 12 cm.
