

ATOMIC ENERGY CENTRAL SCHOOL

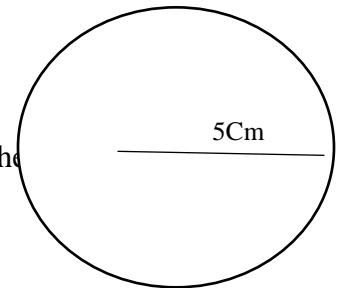
CLASS – 6 PRACTICAL GEOMETRY MODULE – 2 HANDOUT

Tips for making constructions

- ▶ Draw thin lines and mark points lightly.
- ▶ Maintain instruments with sharp tips and fine edges.
- ▶ Have two pencils in the box, one for insertion into the compasses and the other to draw lines or curves and mark points.

The circle

- ▶ Construction of a circle when the radius is known.
- ▶ Step : 1 : Open the compasses for the required radius of 5 cm.
- ▶ Step : 2 : Mark a point with a sharp pencil where we want the centre of the circle. Name it as 'O'
- ▶ Step : 3 : Place the pointer of the compasses on 'O'
- ▶ Step : 4 : Turn the compasses slowly to draw the circle. Be careful to complete the movement around in one instant.



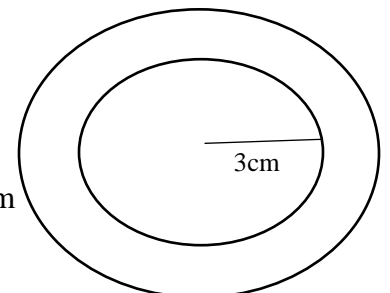
Drawing concentric circles :

Circles with same centre are called concentric circles

- ▶ Construction of a concentric circles when the radii (3 cm, 5 cm) is given.

Steps of constructions

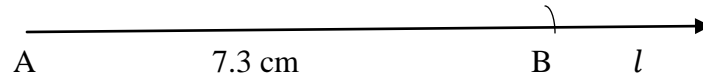
- ▶ Step : 1 : Open the compasses for the required radius of 3 cm.
- ▶ Step : 2 : Mark a point with a sharp pencil where we want the centre of the circle to be . Name it as 'A'
- ▶ Step : 3 : Place the pointer of the compasses on 'A'
- ▶ Step : 4 : Turn the compasses slowly to draw the circle.
- ▶ Step : 5 : now again open compasses for the required radius = 5 cm
- ▶ Step : 6 : Again place the pointer of the compasses on 'A'.
- ▶ Step : 7 : Now we got the circles with same centre which are called concentric circles.



Line Segment

- ▶ Construction of line segment of length 5 cm using Ruler and compasses.
- ▶ Step : 1 : Draw a line l . Mark a point A on the line l .

- ▶ Step : 2 : Place the compasses pointer on the zero mark of ruler . Open it to place the pencil point upto 7.3 cm mark.
- ▶ Step : 3 : Taking caution that the opening of the compasses has not changed, place the pointer on A and swing an arc to cut l at B.
- ▶ Step : 4 : AB is a line segment of required length.



Constructing a copy of a given line segment

- ▶ Suppose you want to draw a line segment whose length is equal to that of a given line segment.
- ▶ Step : 1 : Given AB whose length is not known.
- ▶ Step : 2 : Fix the compasses pointer on A and the pencil end on B. The opening of the instrument now gives the length AB.
- ▶ Step : 3 : Draw any line l choose a point C on l . Without changing the compasses setting, place the pointer on C.
- ▶ Step : 4 : Swing an arc that cuts l at a point, say, D. Now CD is a copy of AB.
- ▶ CD is the copy of AB

