

CLASS- 6

MODULE – 2/8

PRACTICAL GEOMETRY

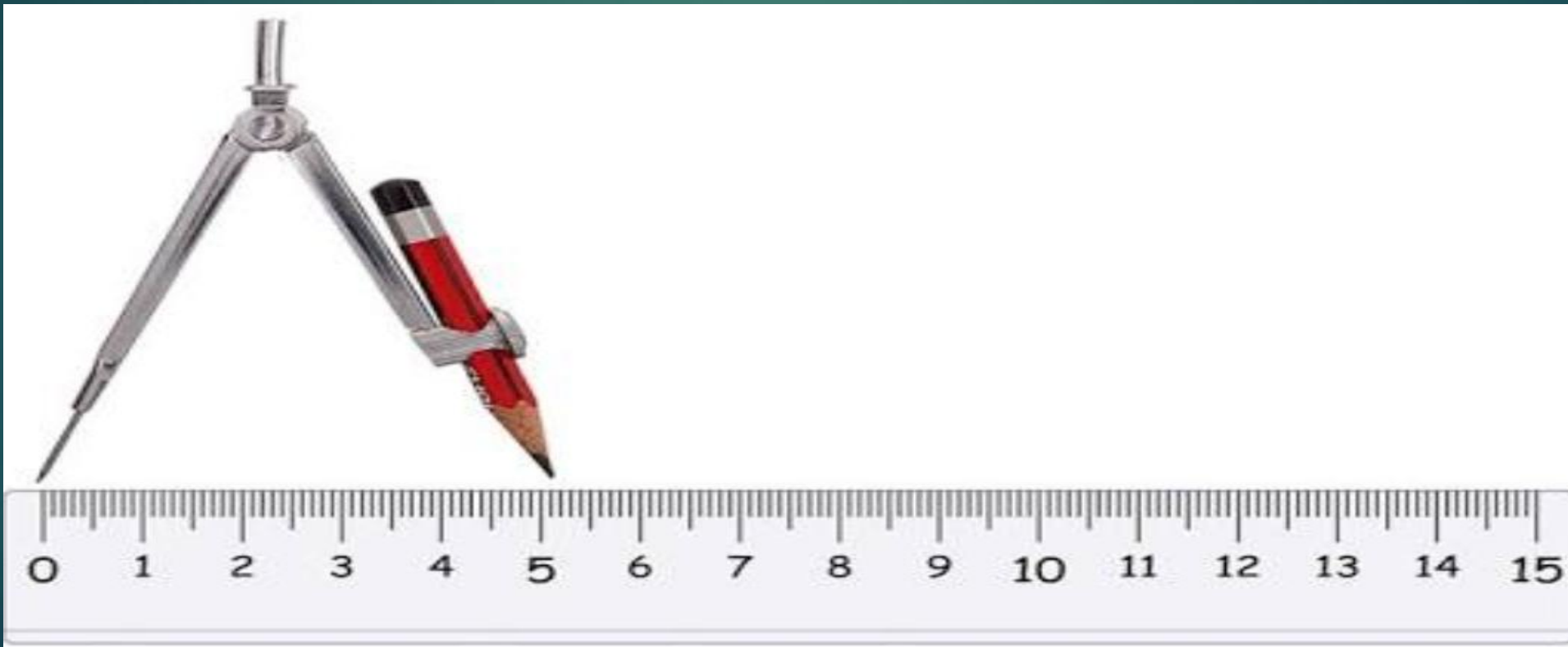
# Tips for making constructions

- ▶ 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.

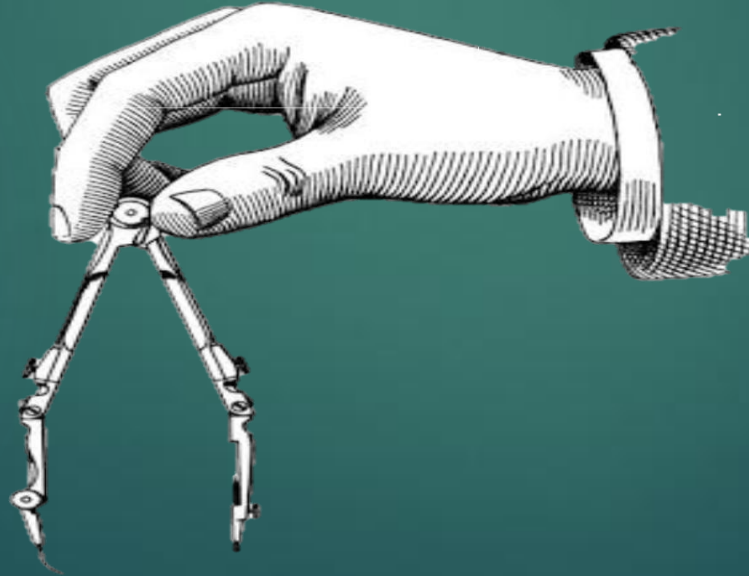


# The circle

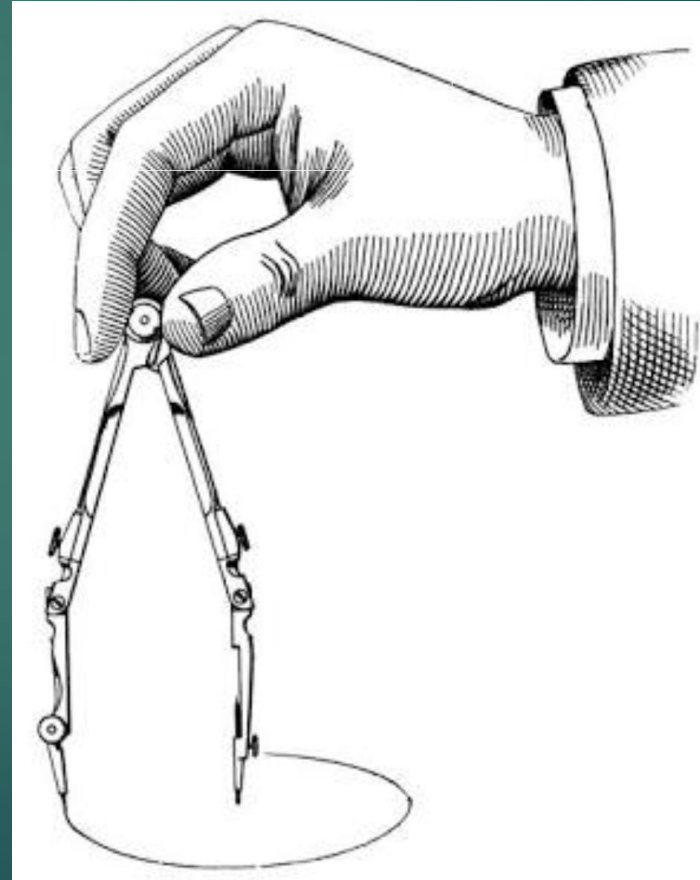
- ▶ Construction of a circle when the radius is known.
- ▶ Step : 1 : Open the compasses for the required radius of 5 cm.



- ▶ Step : 2 : Mark a point with a sharp pencil where we want the centre of the circle to be .  
Name it as 'O'
- ▶ Step : 3 : Place the pointer of the compasses on 'O'



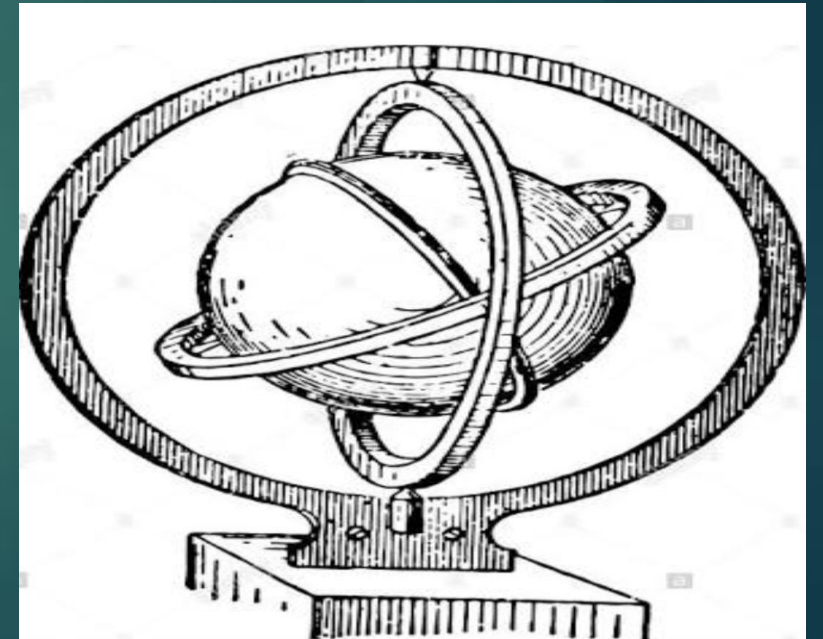
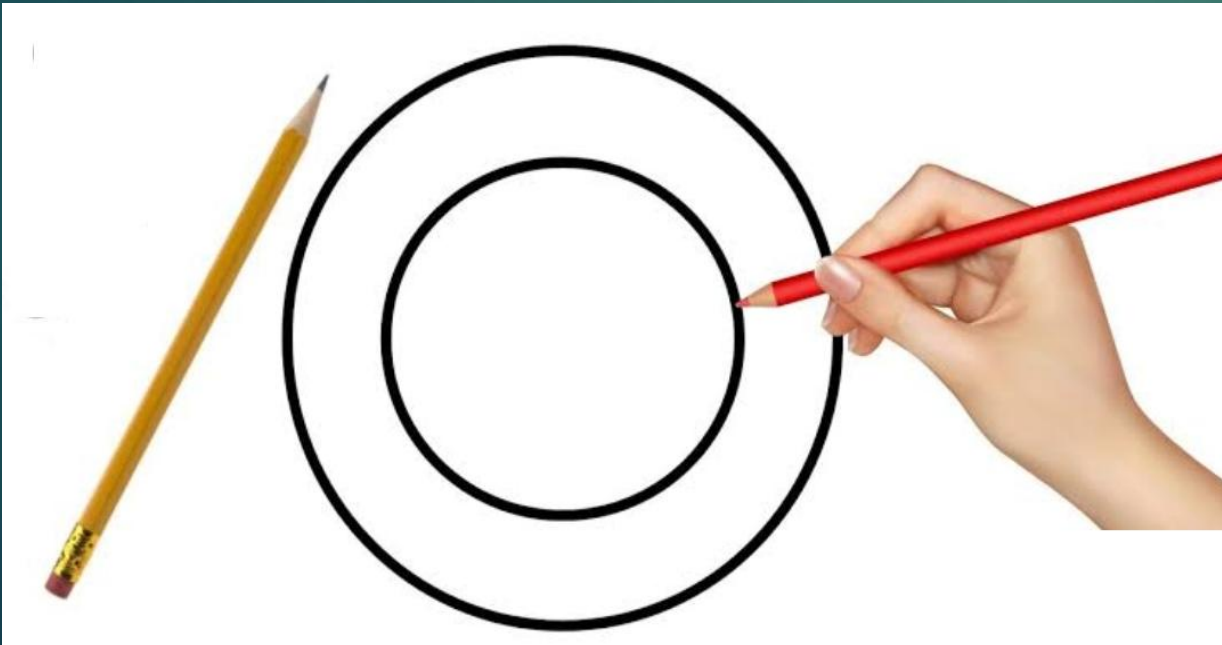
Step : 4 : Turn the compasses slowly to draw the circle. Be careful to complete the movement around in one instant.



# Drawing concentric circles :

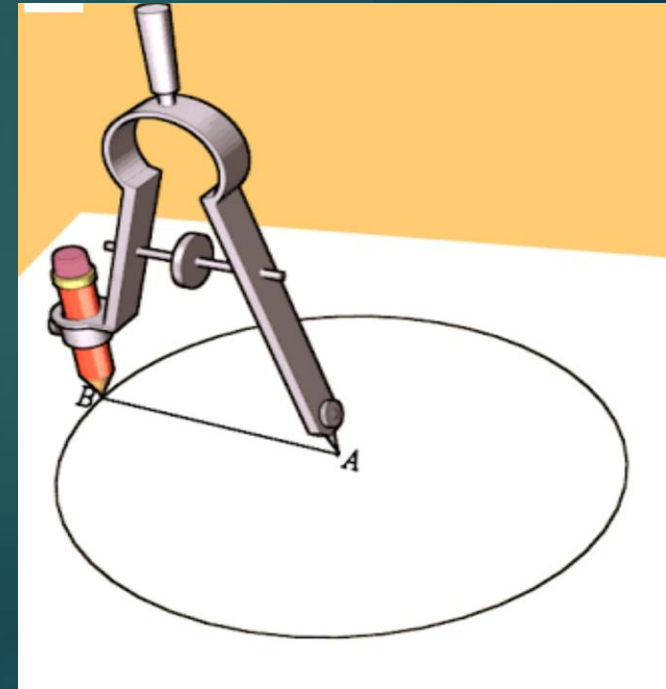
Circles with same centre are called concentric circles

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

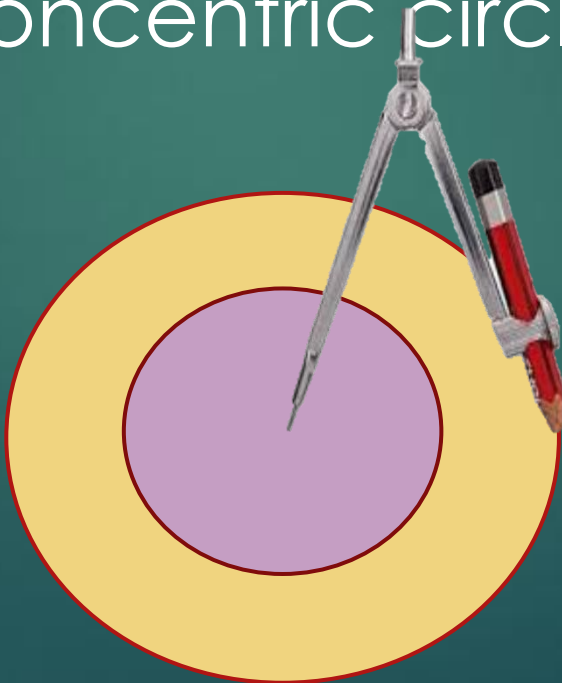


# Steps of constructions

- ▶ 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.



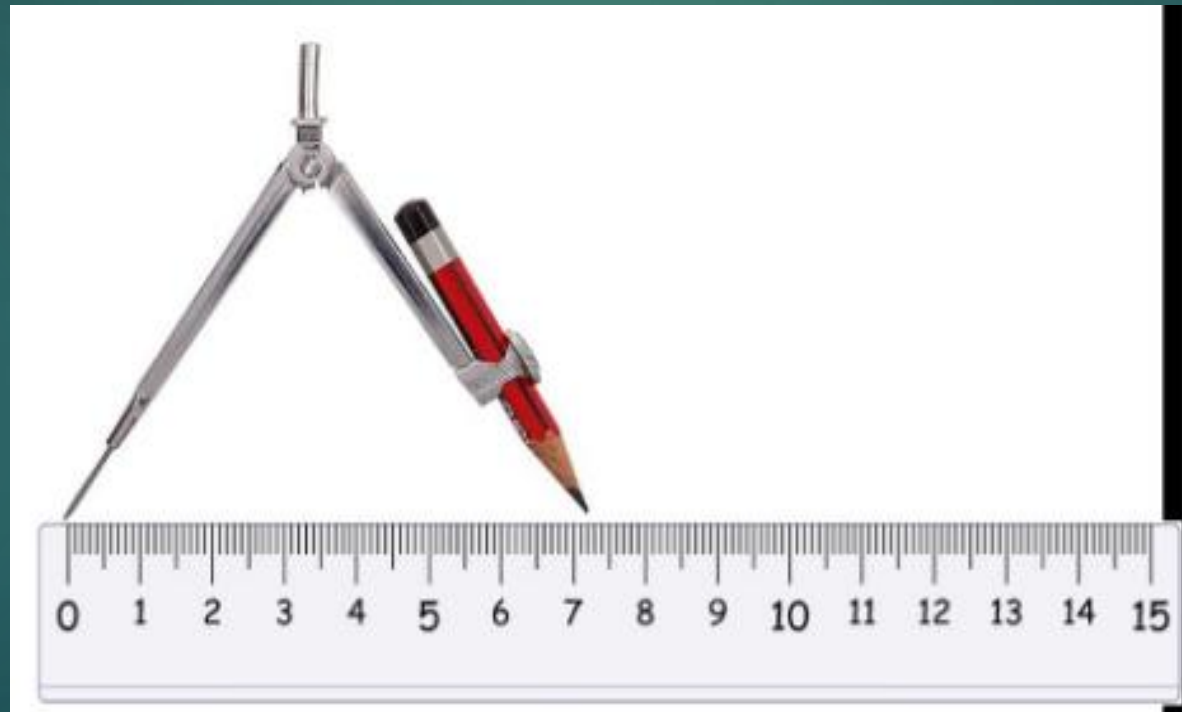


# Line Segment

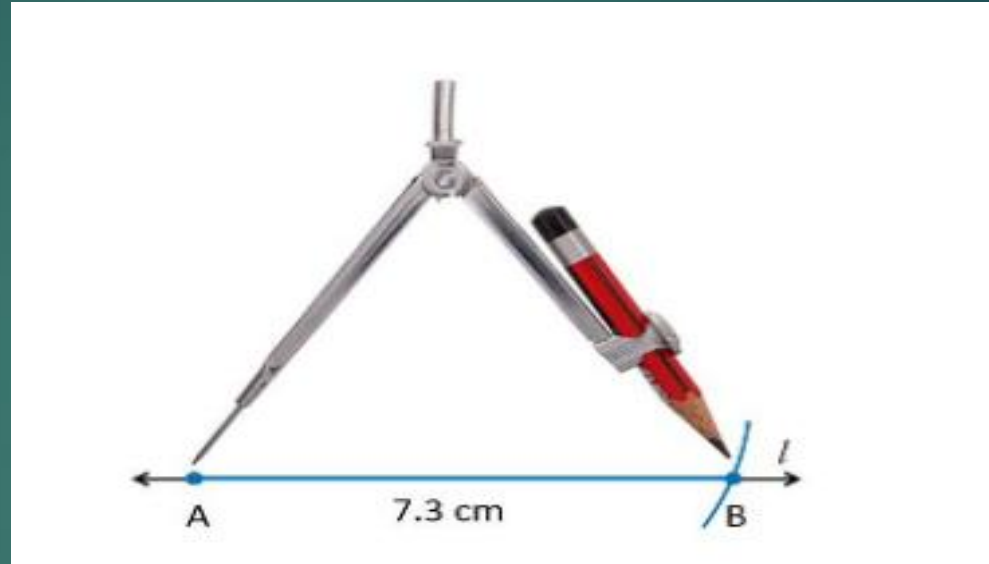
- ▶ Construction of line segment of length 5 cm using Ruler and compasses.
- ▶ Step : 1 : Draw a line  $l$ . Mark a point  $A$  on the line  $l$ .



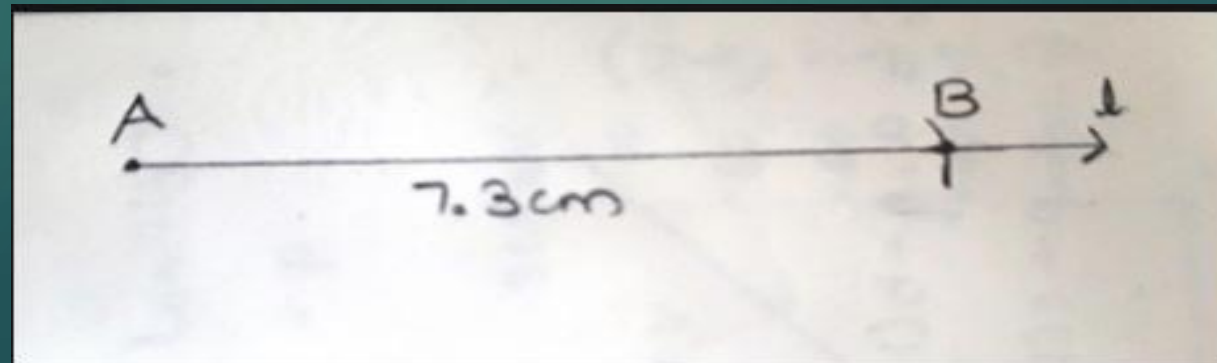
- ▶ Step : 2 : Place the compasses pointer on the zero mark of ruler . Open it to place the pencil point upto 7.3 cm mark.



- ▶ 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.

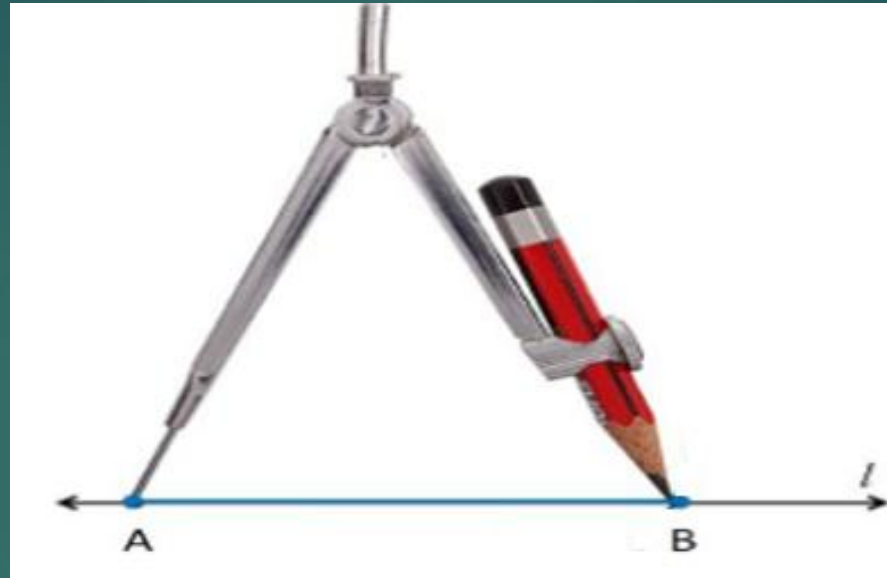


# Constructing a copy of a given line segment

- ▶ 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.



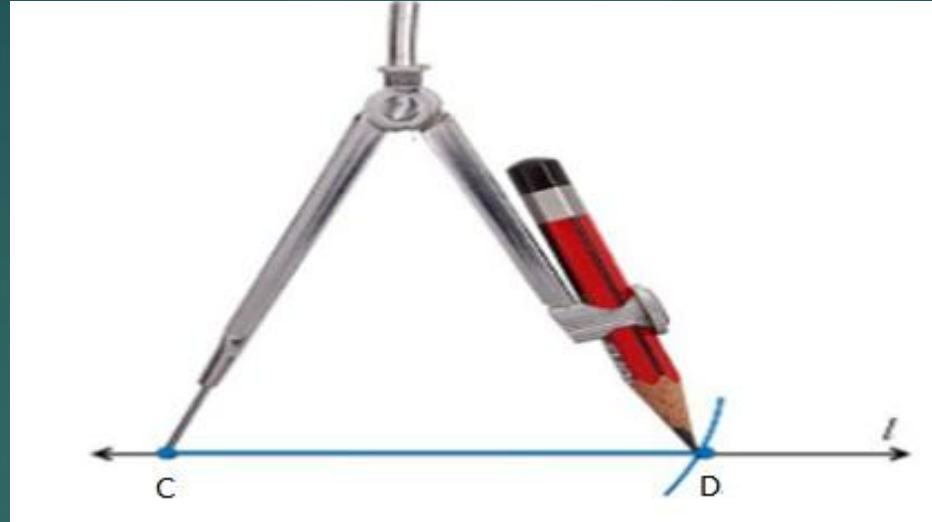
- ▶ Step : 2 : Fix the compasses pointer on A and the pencil end on B. The opening of the instrument now gives the length AB.



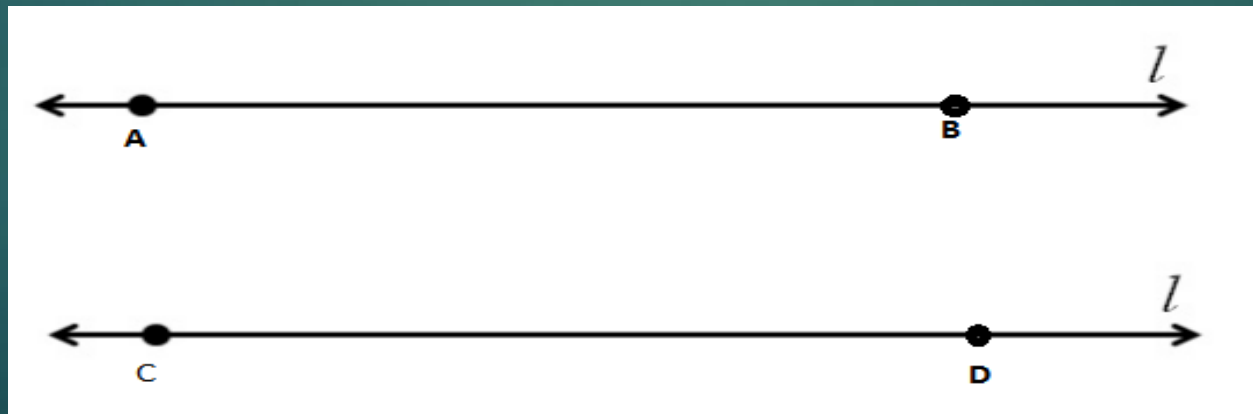
- ▶ Step : 3 : Draw any line  $l$  choose a point C on  $l$ . Without changing the compasses setting, place the pointer on C.



- ▶ 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



# THANK YOU

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