



- PRACTICAL GEOMETRY

CLASS-6

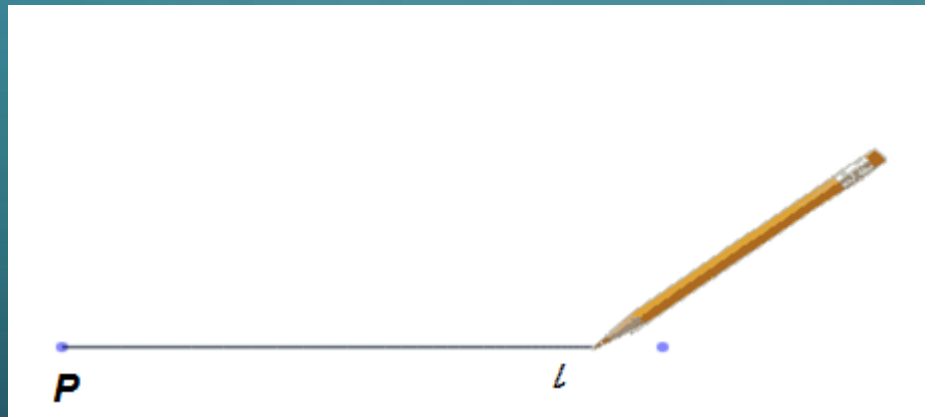
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# ANGLES OF SPECIAL MEASURE

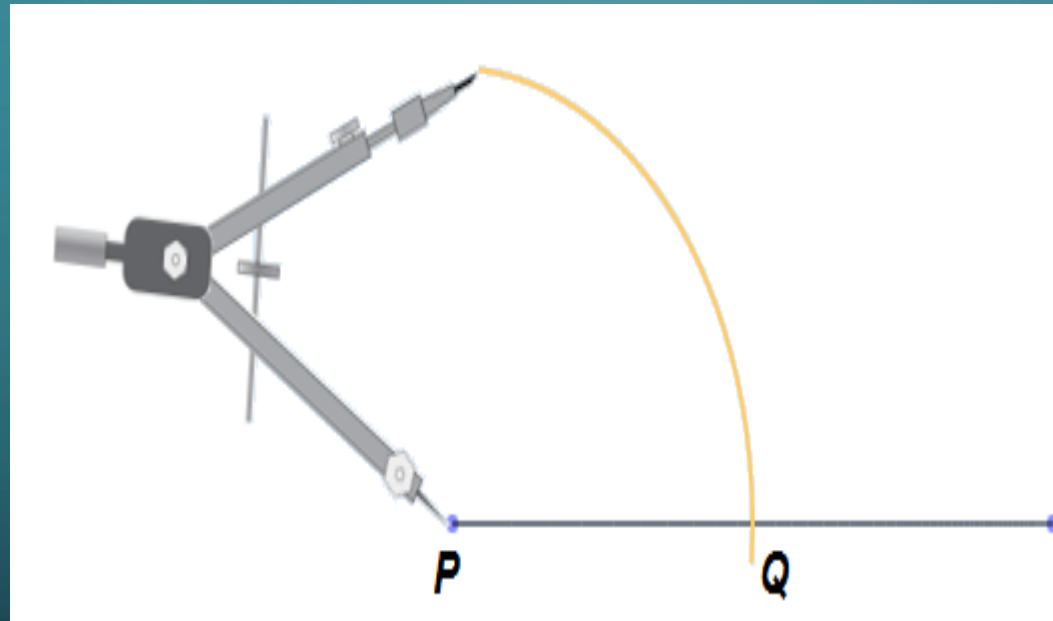
- There are some elegant and accurate measures to construct some angles of special sizes which do not require the use of the protractor.
- We discuss a few here.

# CONSTRUCTING A $60^\circ$ ANGLE

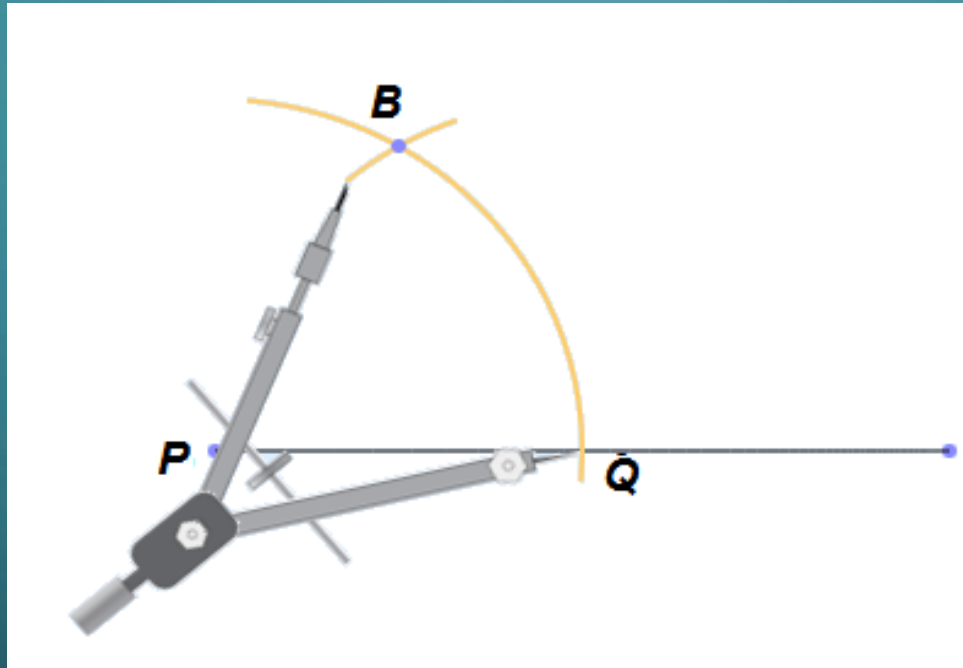
- Draw a line  $l$  and mark a point 'P' on it



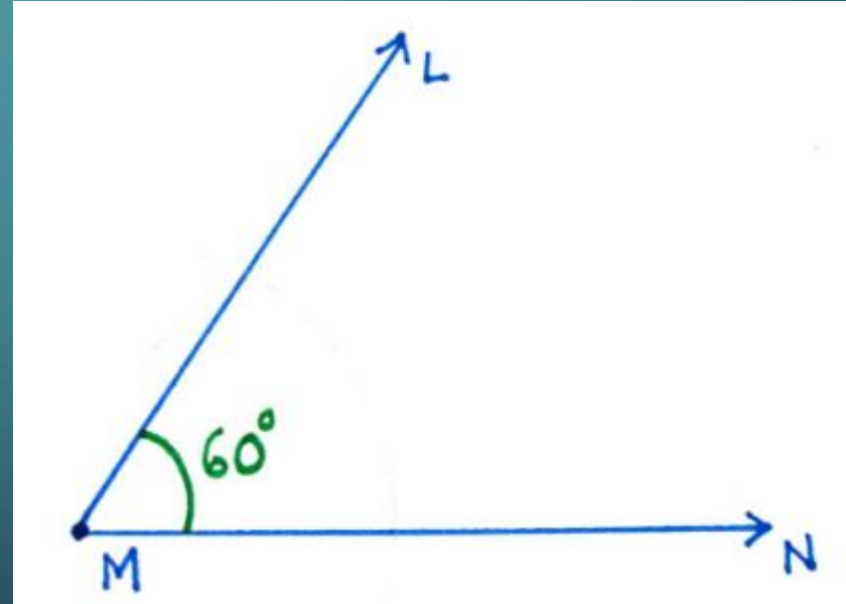
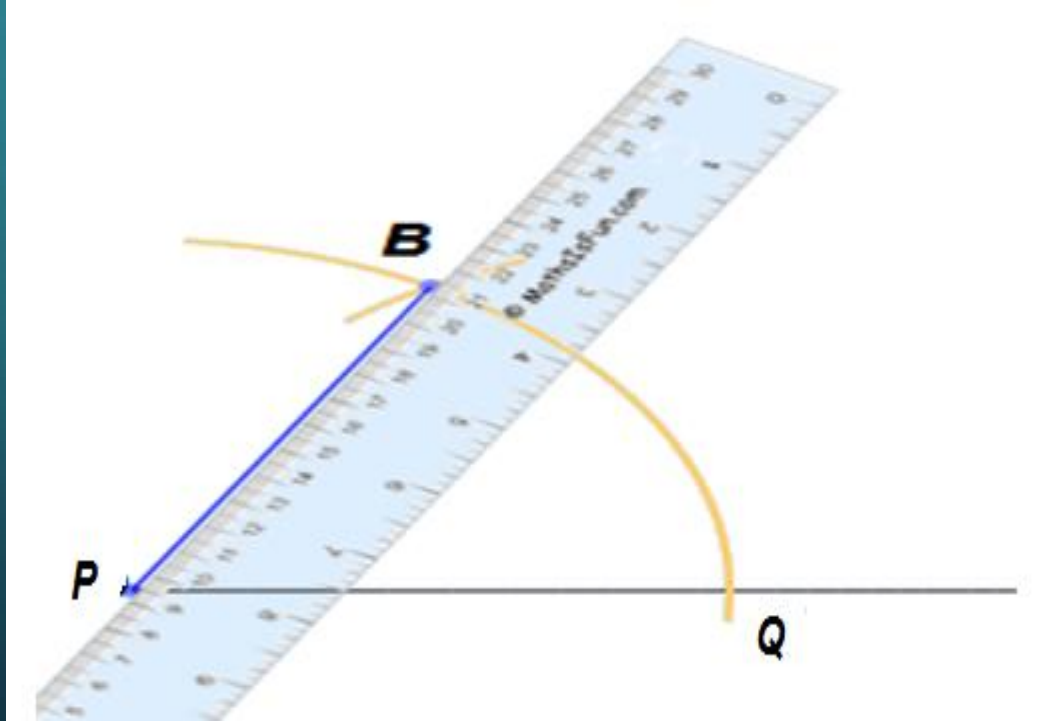
- Place the pointer of the compasses on 'P' and draw an arc of convenient radius which cuts the line PQ.



- With the pointer at Q ( as centre ), now draw an arc that passes the previous arc.

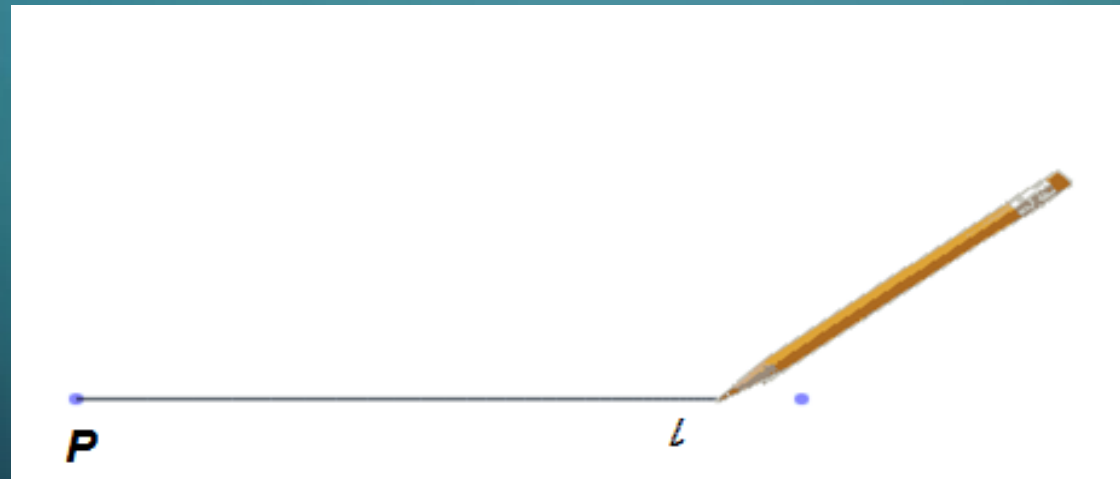


- Let the two arcs intersect at B. join PB.  
We get BPQ whose measure is  $60^{\circ}$

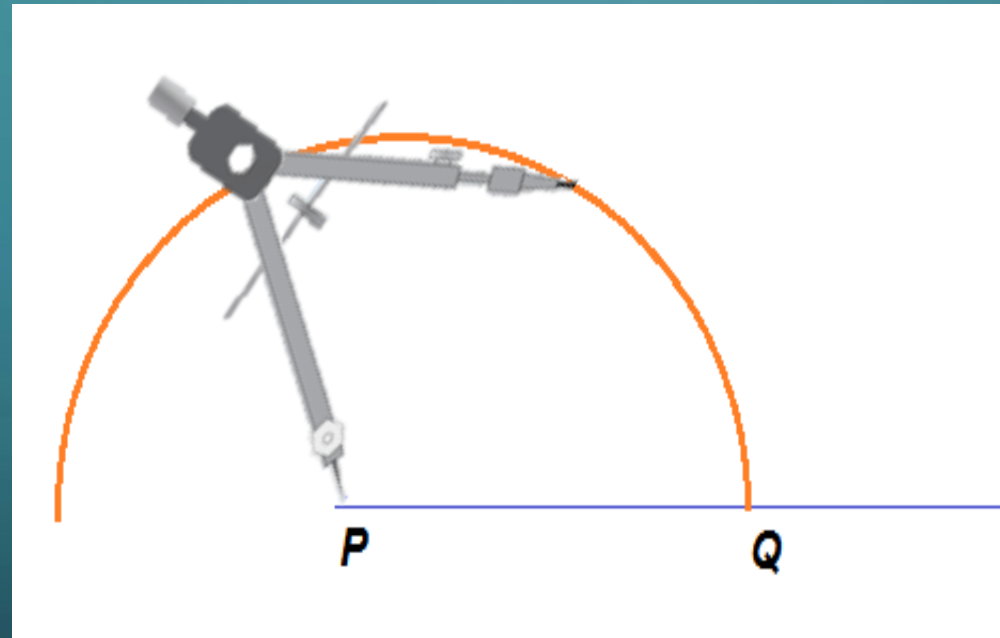


# CONSTRUCTING A $120^{\circ}$ ANGLE

- Draw a line  $l$  and mark a point 'P' on it.

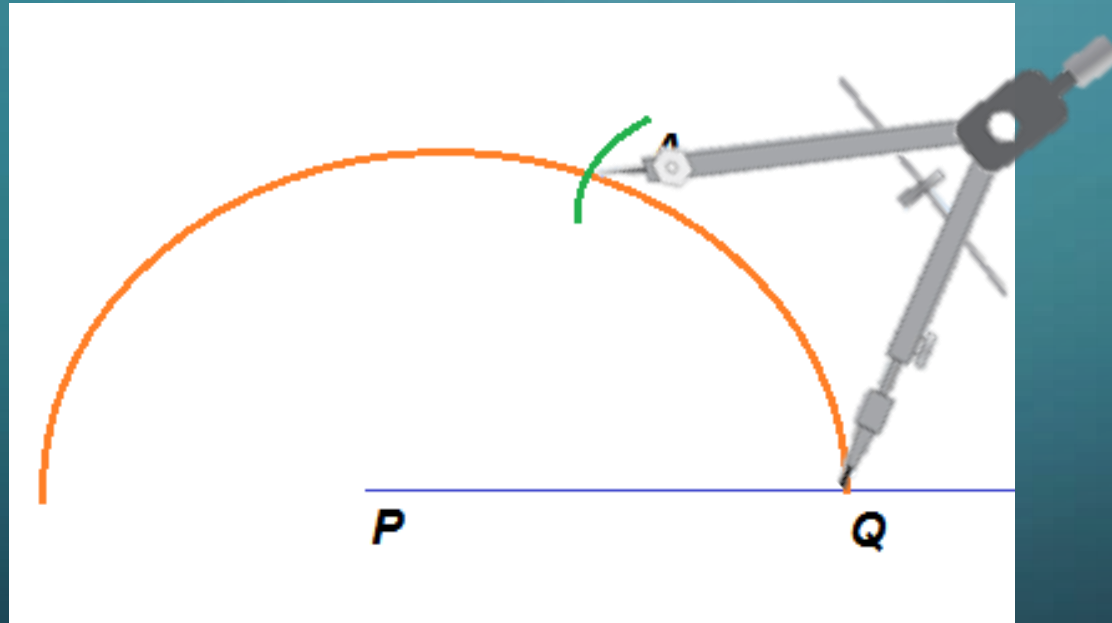


- Place the pointer of the compasses on 'P' and draw an arc of convenient radius which cuts the line PQ.

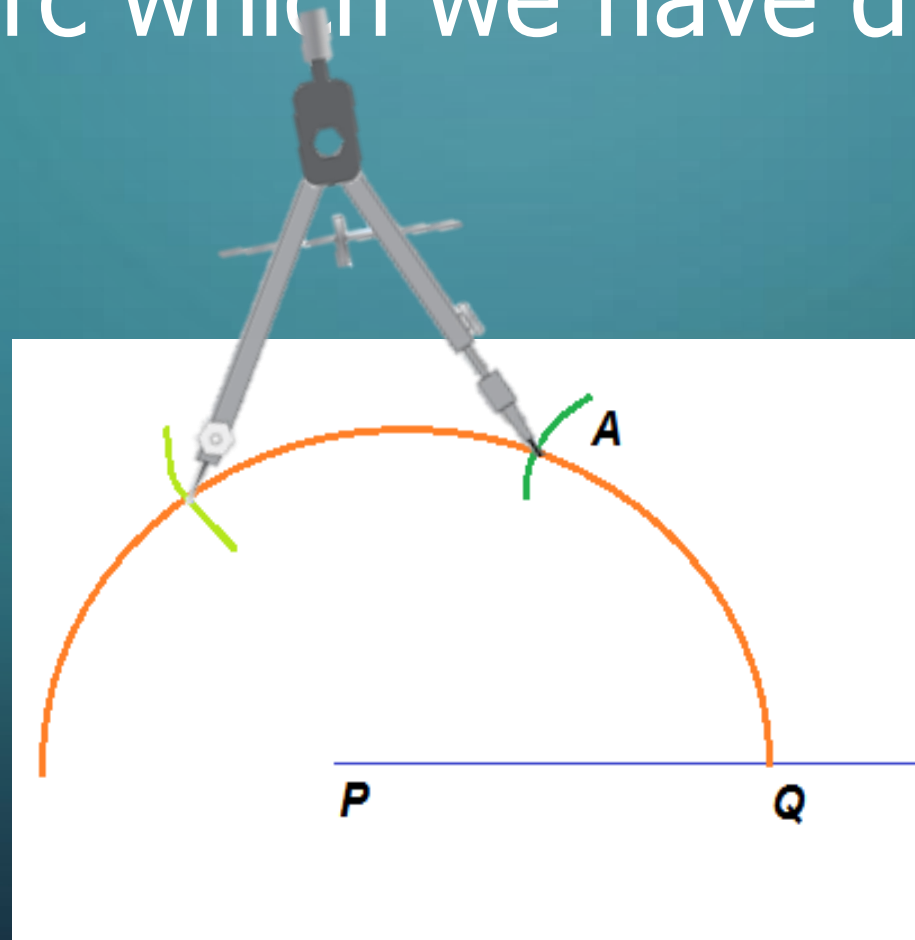




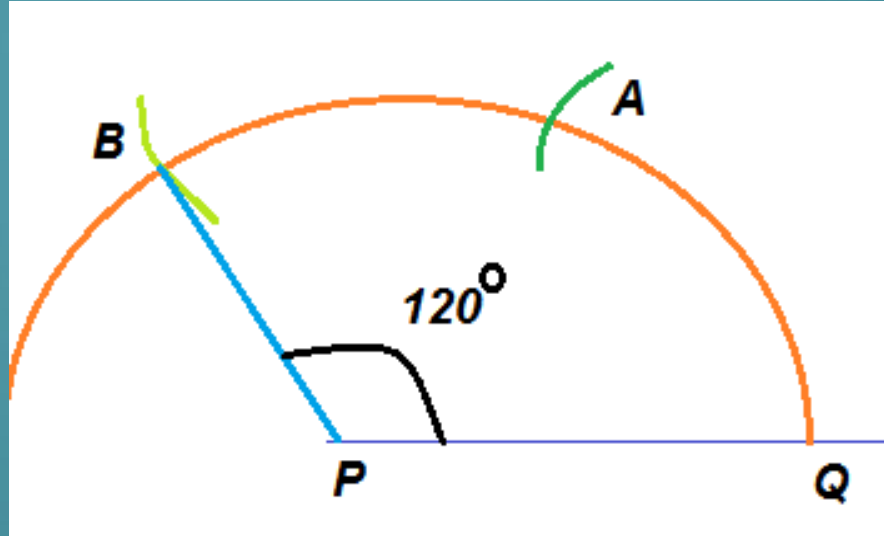
- With the pointer at Q ( as centre ), now draw an arc that passes the previous arc.



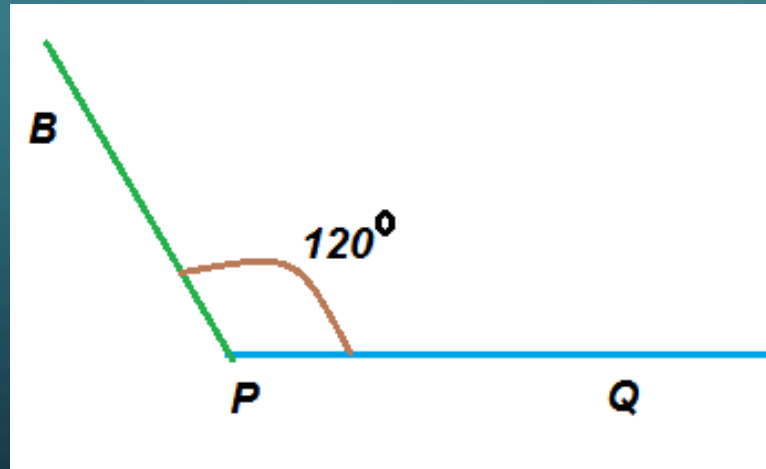
- With A as centre draw another arc which cuts the arc which we have drawn first.



- Join PB.  $\angle BPQ = 120^\circ$



- $\angle BPQ = 120^\circ$

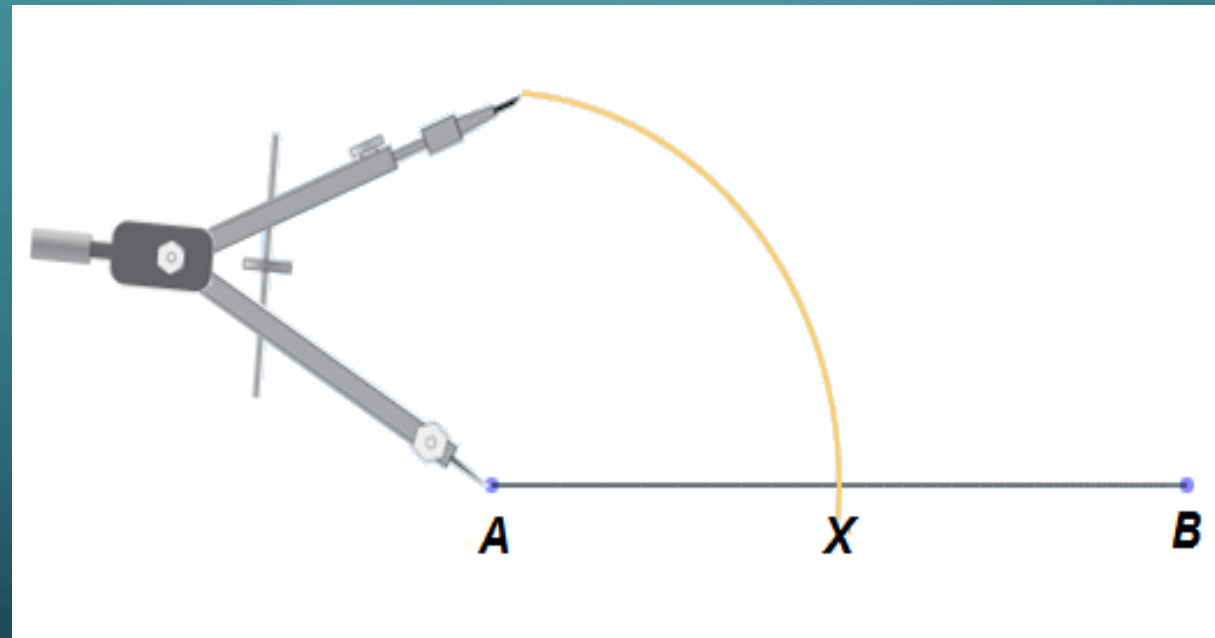


# CONSTRUCTING A $30^{\circ}$ ANGLE

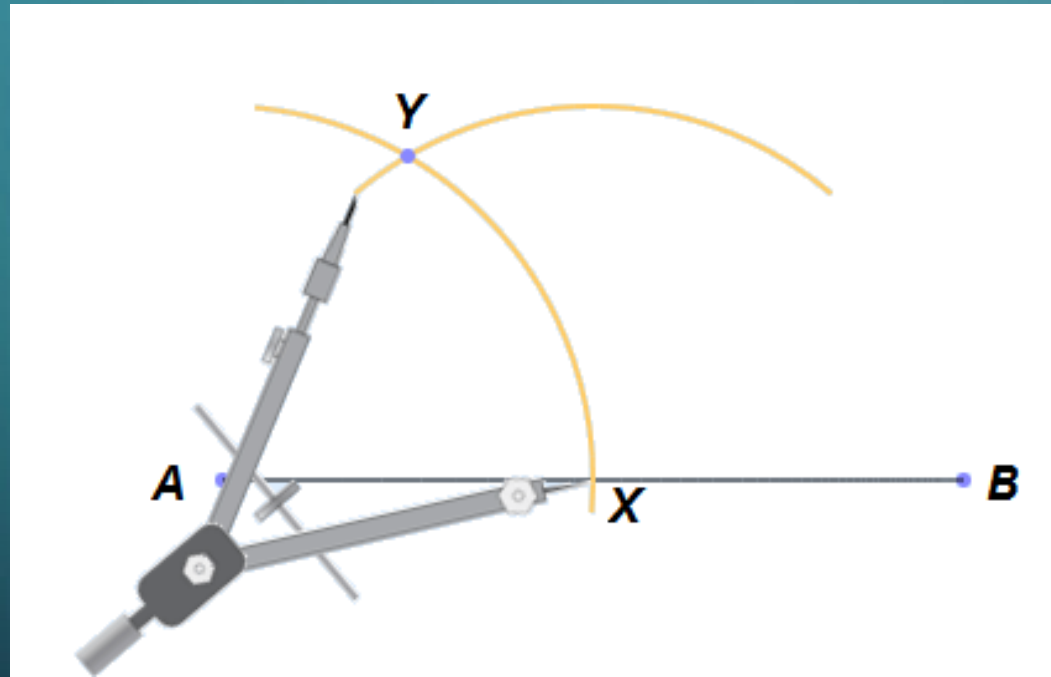
- Draw a ray  $AB$ . Let  $A$  be the vertex of the angle we're going to construct.



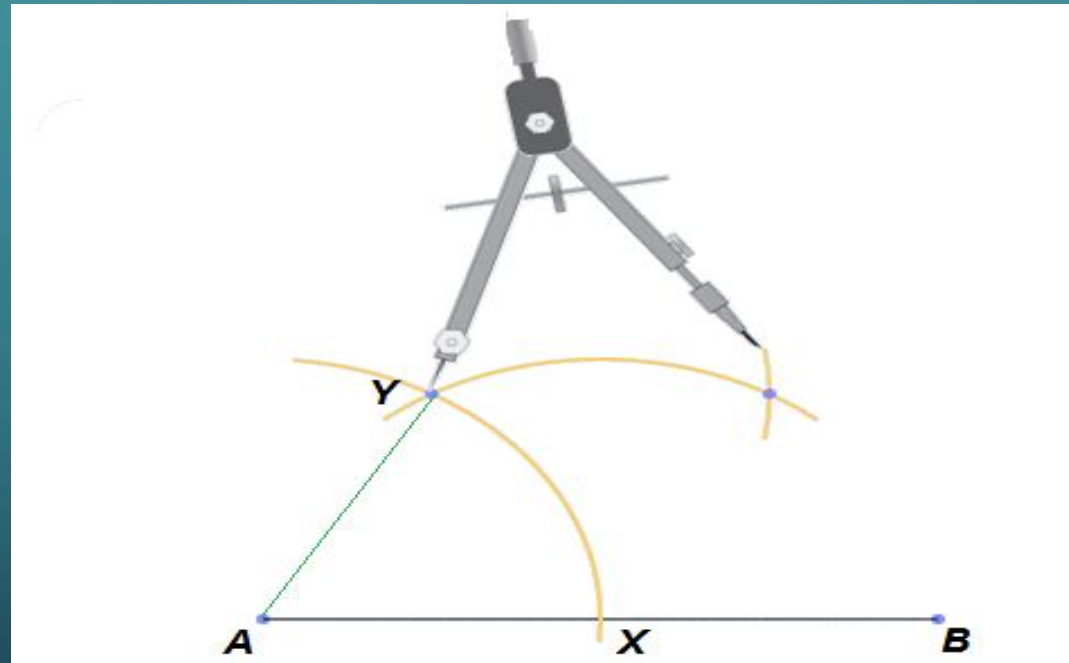
- Place the tip of the compass on A and draw an arc which cuts AB at some point (say X).



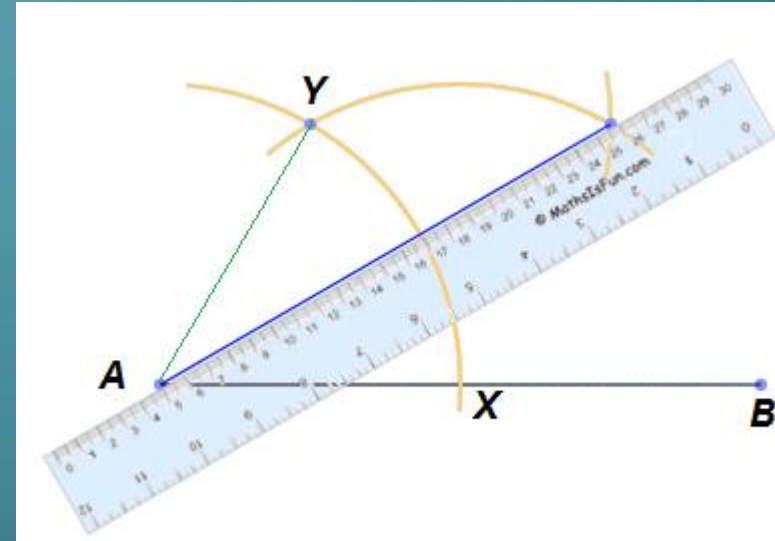
- Place the tip of the compass on X and draw another arc which cuts *arc (first one)* at some point (say Y).



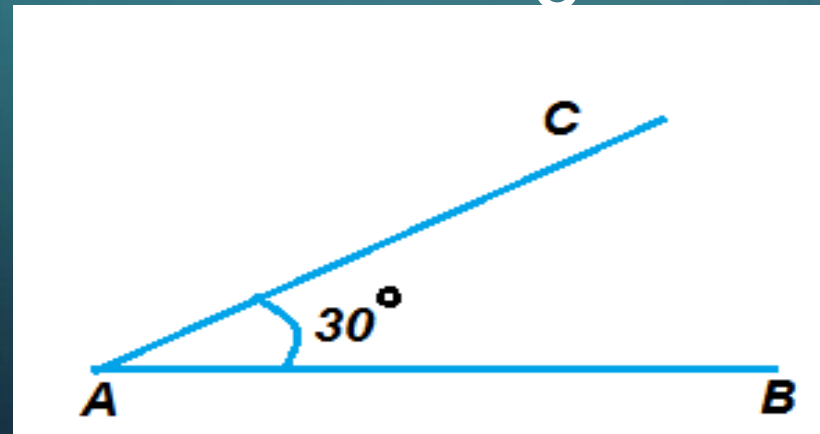
- Join AY. Place the tip of the compass on Y and draw another arc



- Connect the points A and Z with a straight line and extend it to form a ray AC.



- The measure of the angle CAB is  $30^\circ$





# THANK YOU

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