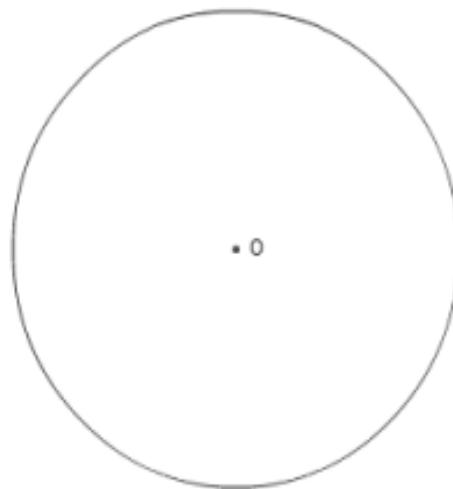


## **Hexagon inscribed in a circle:**

Construction with Demo work:

### **Explanation of method:**

Each side of a regular hexagon is equal to the distance from the center to any vertex. This construction simply sets the compass width to that radius, and then steps that length off around the circle to create the six vertices of the hexagon.



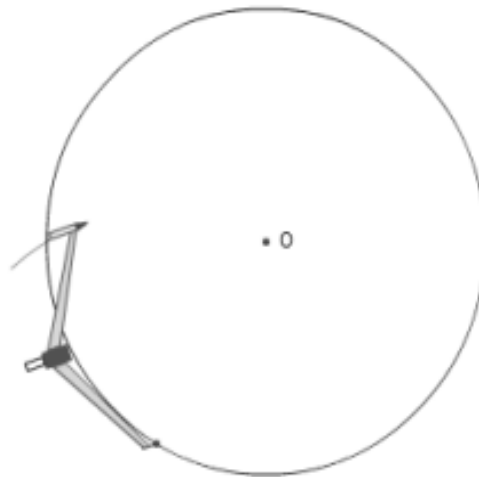
**Draw a given circle, center O.**

Construction with Demo work:

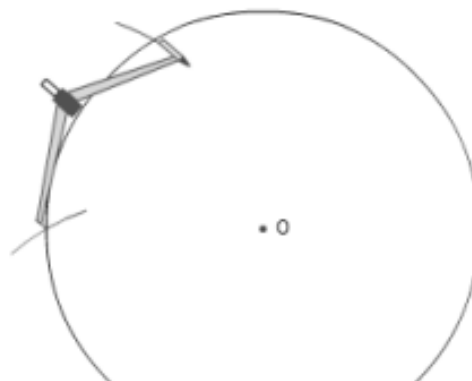
Explanation of method:

Each side of a regular hexagon is equal to the distance from the center to any vertex. This construction simply sets the compass width to that radius, and then steps that length off around the circle to create the six vertices of the hexagon.

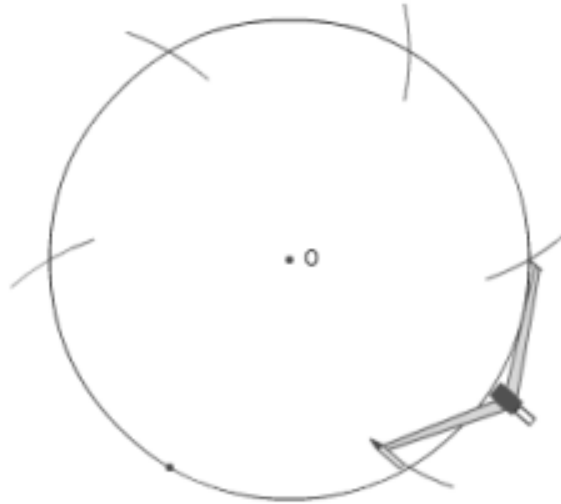
Make an arc across the circle by using the radius of the circle as compass width.  
This will be the next vertex of the hexagon.



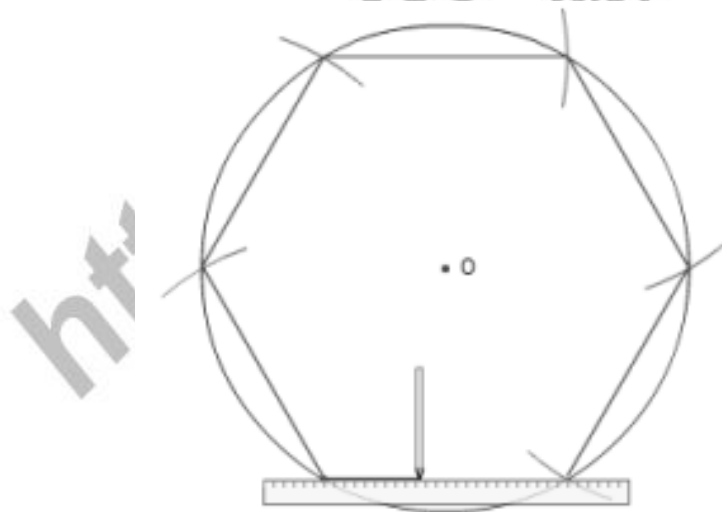
Move the compass on to the next vertex and draw another arc. This is the third vertex of the hexagon.



Mark all six vertices by using the same procedure.



Join each successive pairs of vertices, for a total of six lines. Each side of a regular hexagon is equal to the distance from the center to any vertex



**These lines form a regular hexagon inscribed in the given circle.**