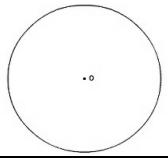
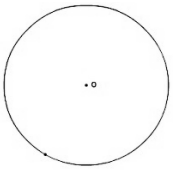
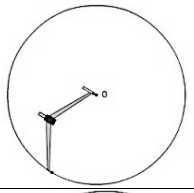
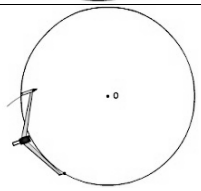
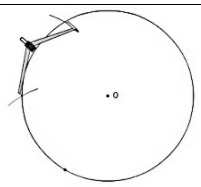
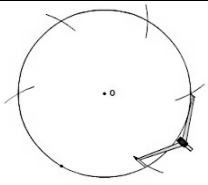
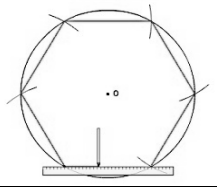
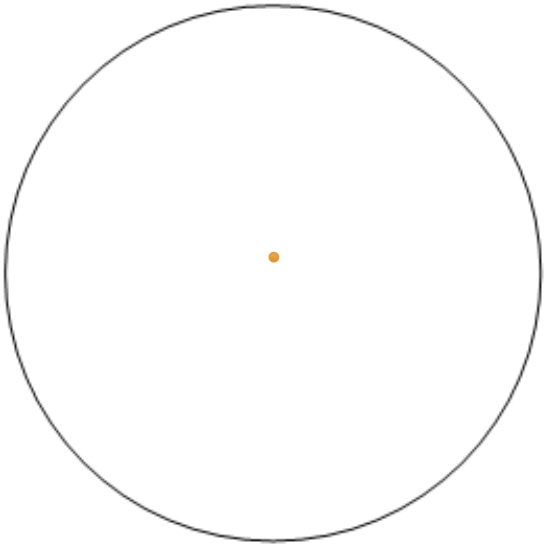
Constructing a Hexagon Inside a Circle Worksheet

A Hexagon is ANY shape composed of 6 intersecting lines. A regular hexagon is a 6-sided shape where ALL lines are the same length and ALL angles are equal in size.

A Regular Hexagon is identified by a combination of the number of sides to the shape, the length of the sides AND the size of its angles. A Regular Hexagon has Six Sides equal in length ... and Six Angles equal in size (all are 120 degrees).

After doing this	Your work should look like this
We start with the given circle, center O.	
Mark a point anywhere on the circle. This will be the first vertex of the hexagon.	
Set the compasses on this point and set the width of the compasses to the center of the circle. The compasses are now set to the radius of the circle	
Make an arc across the circle. This will be the next vertex of the hexagon. (It turns out that the side length of a hexagon is equal to its circumradius - the distance from the center to a vertex).	
Move the compasses on to the next vertex and draw another arc. This is the third vertex of the hexagon.	
Continue in this way until you have all six vertices.	
Draw a line between each successive pairs of vertices, for a total of six lines.	

1. Construct the largest regular hexagon that will fit in the circle below.



2. Find the center of the circle below and construct a hexagon inscribed in the circle.