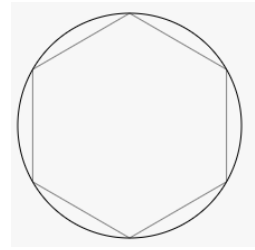
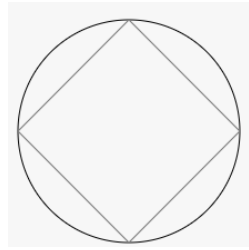
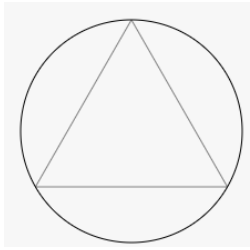


Geometry WS 1.3 – Constructing Inscribed Polygons

Inscribed polygon – a regular polygon placed inside a circle with all vertices lying on the circumference of the circle.



Constructing an inscribed Square.

1. Draw a circle using point O as the center.
2. Draw a diameter (segment passing through the center O).
3. Construct the **perpendicular bisector** of the diameter draw in step 2.
4. Connect the four points where the diameters intersect the circle.

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Constructing an inscribed Hexagon.

1. Draw a circle using point O as the center.
2. Draw a diameter (segment passing through the center O).
3. Set your compass to the length of the radius (distance from center to circle)
4. From each endpoint of the diameter, draw arc that intersects the circle at two points.
5. Draw segments connecting the six vertices (endpoints of diameter and the four points of intersection from step 4).

**Constructing an inscribed Equilateral Triangle.**

1. Follow the first four steps of constructing an inscribed hexagon.
2. Draw segments connecting every other vertex.



Homework: On a separate sheet of paper do each of the three constructions (inscribed equilateral triangle, inscribed hexagon and inscribed square).