Notes – Constructions of Inscribes Figures Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Constructing a Square Inscribed within a Circle**

Step 1: Create a diameter through the center of the circle. Mark the endpoints.

Step 2: Construct the perpendicular bisector of the diameter.

Step 3: Use the four endpoints of the diameters to create the square.

**Constructing a Hexagon Inscribed within a Circle**

Step 1: Create a diameter through the center of the circle. Mark the endpoints.

Step 2: Measure the radius of the circle with the wheel of the compass on an endpoint of the diameter and the pencil on the center of the circle.

Step 3: Draw an arc that intersects the circle twice. Mark the intersection points. Draw a second arc from the opposite endpoint of the diameter. Mark the intersection points.

Step 4: Use the 6 points from the arc intersections and diameter to create the hexagon.

**Constructing an Equilateral Triangle Inscribed within a Circle**

Step 1: Create a diameter through the center of the circle. Mark the endpoints.

Step 2: Measure the radius of the circle with the wheel of the compass on an endpoint of the diameter and the pencil on the center of the circle.

Step 3: Draw an arc that intersects the circle twice. Mark the intersection points.

Step 4: Use the 2 arc intersection points and the opposite endpoint of the diameter to create the equilateral triangle.