Geometry CC WS 1.7B Points of concurrency continued
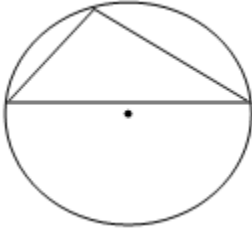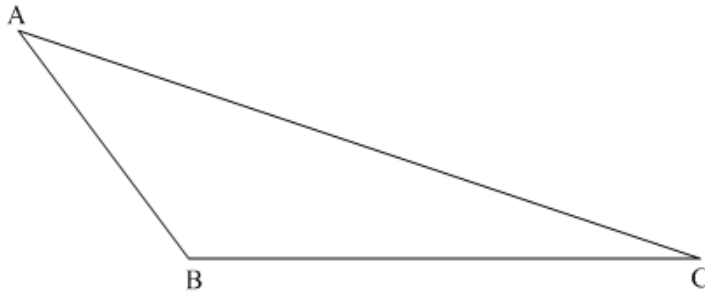
Circumscribed circle (triangle is inscribed) – all vertices of the polygon are points on the circle
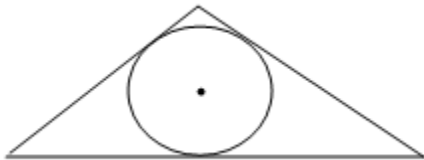
Center of the circle is the **circumcenter**.
(formed by **perpendicular bisectors**)

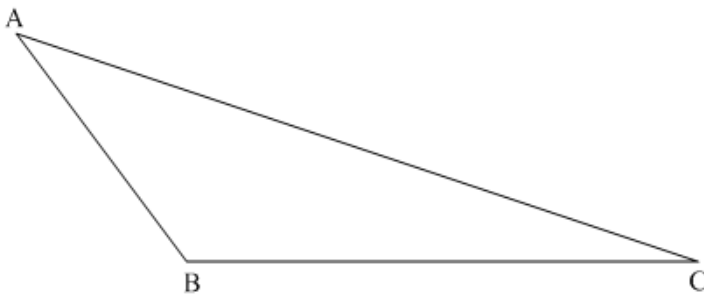Exercise#1: Construct the circumcenter in the obtuse triangle below.

A

B

C

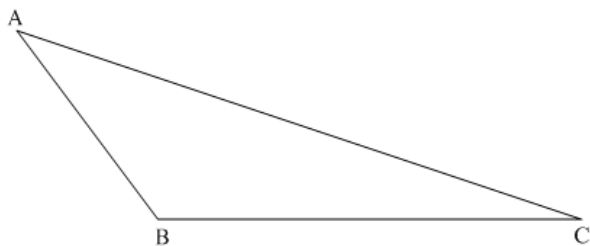Inscribed circle – each side of the polygon is tangent to the circle (intersects at one point)

Center of the circle is the **incenter**.
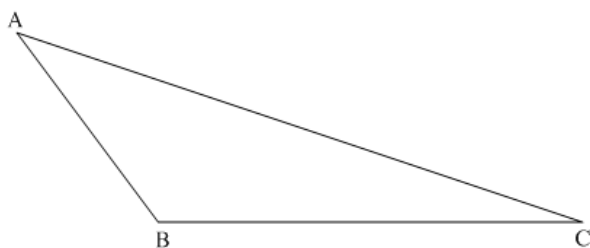(formed by **angle bisectors**)

Exercise #2: Construct an inscribed circle in the triangle below.

A

B

C

Exercise: Construct the centroid for the obtuse triangle below (formed by the medians)

A

B   C

Exercise: Construct the orthocenter for the obtuse triangle below (formed by the altitudes)

A

B   C

Complete the table below

Point of concurrency	Type of segments forming the point	Properties	Location for acute triangle (inside or outside of triangle)	Location for obtuse triangle (inside or outside of triangle)
Centroid				
Circumcenter				
Incenter				
Orthocenter				