Create a triangle with the polygon tool.
Make sure the points can be moved to be any type of triangle.

CIRCUMCENTER:

CONSTRUCT the PERPENDICULAR BISECTORS of EACH side of the triangle. Make their point of intersection and label it as "Circumcenter." Use this point as a center of a circle and go through any vertex of the triangle.

Using the arrow selection tool, click and drag one vertex of the triangle to make each type of triangle.

1.) How do you know you made an acute triangle?

2.) How do you know you made a right triangle?

3.) How do you know you made an obtuse triangle?

HIDE the perpendicular bisectors.

INCENTER:

CONSTRUCT the ANGLE BISECTORS of EACH angle of the triangle. Make their point of intersection and label it as "Incenter." From this point make a perpendicular line from here to any side. Create the intersection from the new perpendicular line and the side. Make a circle centered at the incenter through the point you just made.

Using the arrow selection tool, click and drag one vertex of the triangle to make each type of triangle.

1.) How do you know you made an acute triangle?

2.) How do you know you made a right triangle?

3.) How do you know you made an obtuse triangle?

HIDE the lines you used to make the incenter.

There should be two circle on your screen. Is there any relationship you can see with them? If so, what is it?

Copy and paste the link to your Geogebra worksheet here: