

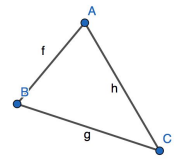
## Circumcircle of a Triangle Using GeoGebra

What is a **Circumcircle of a Triangle**?

A **Circumcircle of a Triangle** is the circle that passes through all three vertices of the triangle while only touching one single point on each vertex. The construction first establishes the **circumcenter** (the circumcenter of a triangle is the point where the **perpendicular bisectors** of the sides intersect) and then draws the circle.

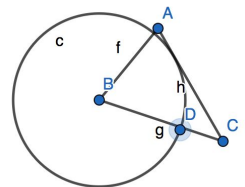
Step 1:

Draw a triangle using the *segments* tool.



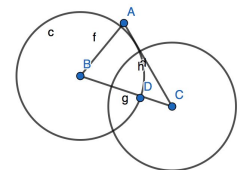
Step 2:

Use the *circle with center* tool. Choose one side to start with; click an endpoint of the side and drag it slightly passed where the mid-point that side would be.



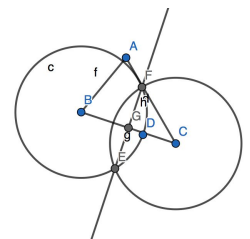
Step 3:

Use the *compass* tool under circles. Click the circle you just made (it will copy that circle), then click the opposite endpoint of that side (this endpoint is the center of your new circle).



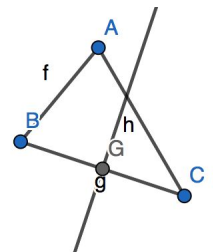
Step 4:

Use the *points* tool under basic tools. Create two points where the circles intersect. Next, use the *line* tool under lines to connect those two points. Finally, create a point where that newly created line intersects the sides of your triangle.



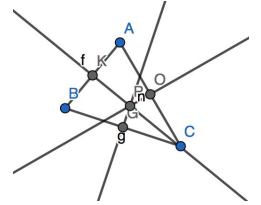
Step 5:

I highly recommend going to the side bar and “hiding” all those extra lines before moving on to the other sides of the triangle. It is important to keep the perpendicular bisecting line.



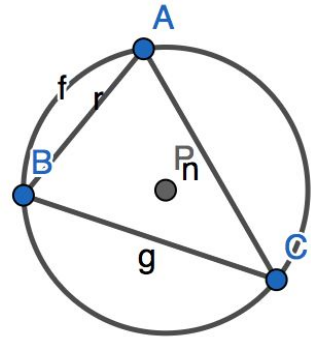
Step 6:

Repeat steps 2 through 5 for the remaining two sides of the triangle. This will create an intersection of the three lines called the circumcenter. Use the *point* tool to create the circumcenter.



Step 7:

For this final step, I suggest hiding the lines, but keeping the circumcenter point. Use the *circle with center* tool. Click the circumcenter point and drag the circle out to the vertices of the triangle.



**There you go! Now you have the Circumcircle of a Triangle using GeoGebra!!!!**

...And you know what's even cooler?!?!?!?

Drag any of the points of the original triangle and you get a new and improved triangle, it's circumcenter, and it's circumcircle! Check it out!!!

I simply dragged point

