Chapter - 12 Geometry circumcentre of triangle

Objective :

Using GeoGebra, the students will be able

-to identify and use required tools to draw circumcircle of triangle

-to find the circumcentre of triangle.

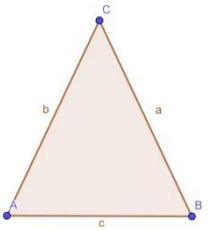
Skills to be attained : To construct the circumcentre and circumcircle of triangle using GeoGebra tools

Tools/website/Resources: GeoGebra

Teacher led instruction:

Draw a Triangle → Construct Perpendicular Bisectors → Find the Circumcentre → Draw the Circumcircle → Find circumradius

Open : Start GeoGebra on your computer or use the web version at geogebra.org. Right click on the graphics view, hide the axis and grid.

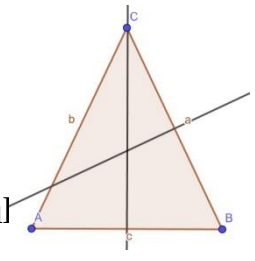


Step 1: Draw a Triangle

- Select the Polygon tool.
- Click three points to form a triangle (e.g., points A, B, and C).

Step 2: Construct Perpendicular Bisectors:

- Select the Perpendicular Bisector tool.
- Click on each side of the triangle to draw the perpendicul

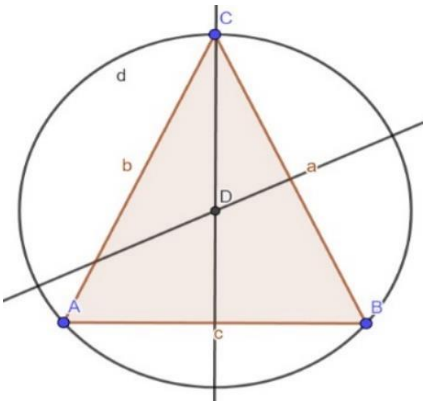


Step 3: Find the Circumcentre:

- The point where the perpendicular bisectors intersect is the circumcenter

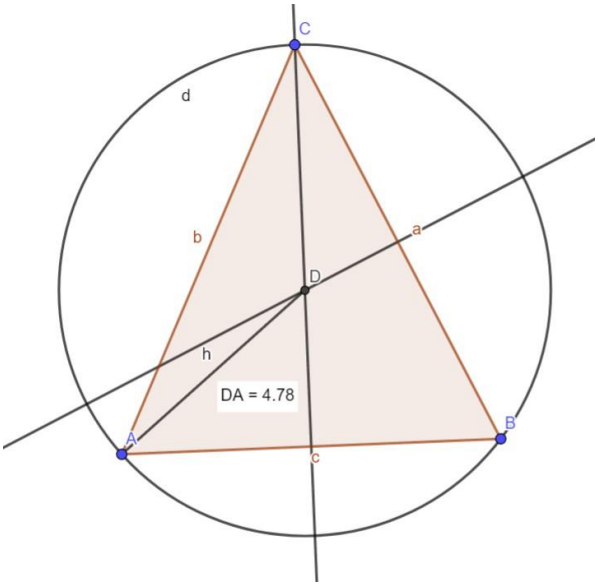
Step 4: Draw the Circumcircle:

- Select the Circle with Centre through Point tool.
- Click on the circumcentre (point O) and then on one of the triangle's vertices to draw the circumcircle.



Step 5: Find circumradius:

- Select the Segment tool and click the circumcentre and draw a line segment to any one of the triangle vertices.for example A.
- Select the Distance or Length tool and click the circumcentre and any one of the triangle vertices.for example A



Student Activity:

1. Students open GeoGebra and Create this applet
2. Draw a triangle ABC, locate its circumcentre and draw the circumcircle and find circumradius

Conclusion :

- Recap all the tools learned in the class.
- Encourage the students to list out a real-world example where the concept of a circumcenter is used?