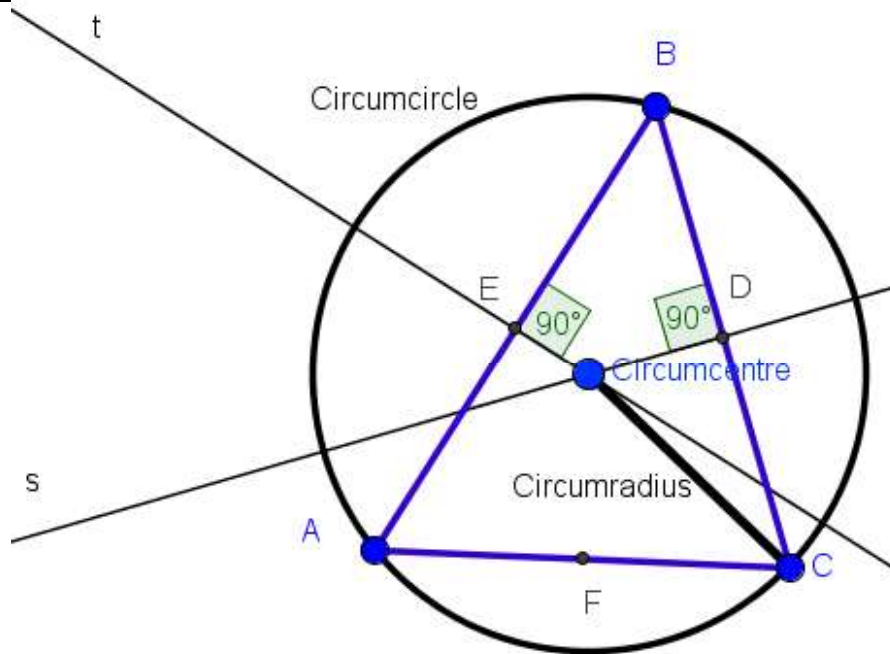# Student Activity Construction 16

Use in connection with interactive file "Constr 16" on the Student's CD.

Construction 16: To construct a circumcentre and circumcircle of a given triangle, using only straight edge and compass.

1. Name the mid points of the line segments AB, BC and AC.

   _____

   _____

2. What is the relationship between side AB and line t?

   _____

   _____

3. What is the relationship between side BC and line s?

   _____

   _____

4. Name the perpendicular bisectors of AB and BC.

   _____

   _____

5. What is the name of the point where the two perpendicular bisectors meet?
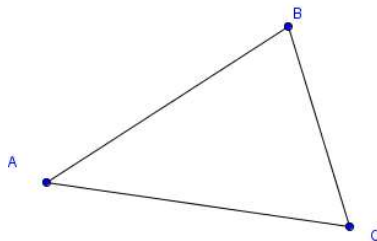
   _____

6. Name the circle whose radius is the same distance from all of the vertices of the triangle to the circumcentre?

_____

7. Name 3 line segments (not all shown in the interactive file) that can be known as a circumradius of the circumcircle in the interactive file.

_____

8. Move the points A, B or C and describe what happens.

_____

_____

9. Describe how to find the circumcentre of a triangle and draw the circumcircle of a triangle.

_____

_____

_____

_____

10. Find the circumcircle of the following triangle. List construction steps.

_____

_____

_____

_____

11. The organisers of a race, where the track is circular, want to locate a position for their first aid station, so that the station is equidistant from each point on the track. Advise them how to do this.

_____

_____