

**Mathematics 2260H – Geometry I: Euclidean geometry**  
TRENT UNIVERSITY, Winter 2013

**Assignment #6**  
**Circumcircles**

*Due on Friday, 1 March, 2013.*

A circle that passes through all three vertices of  $\triangle ABC$  is called the *circumcircle* of the triangle and its centre is the triangle's *circumcentre*.

1. Show that the perpendicular bisectors of the sides of  $\triangle ABC$  meet in a point that is equidistant from all three vertices. [6]
2. Use 1 to help show that any triangle has an unique circumcircle. [4]