

Mathematics 2260H – Geometry I: Euclidean geometry

TRENT UNIVERSITY, Winter 2012

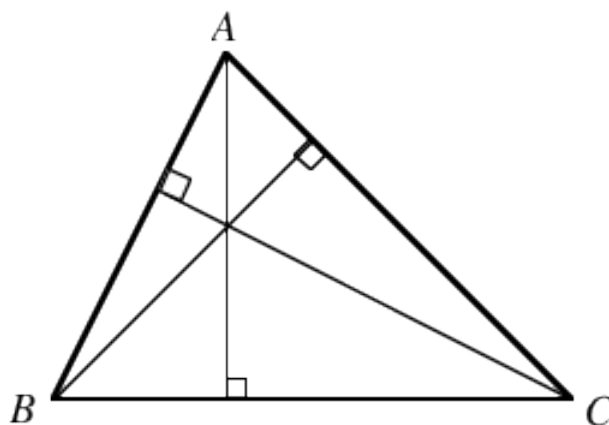
Assignment #8*

Another day, another centre ...

Due on Thursday, 15 March, 2012.

The *altitude* from vertex A of $\triangle ABC$ is the line from A to the opposite side BC of the triangle that is perpendicular to BC . The altitudes from the other vertices of the triangle are defined similarly.

1. Given $\triangle ABC$, show that the three altitudes from vertices A , B , and C of the triangle are concurrent (*i.e.* meet at a single point). [10]



NOTE: The point at which the three altitudes meet is the triangle's *orthocentre*.

* The previous Assignment #8 should have been Assignment #7 ... This one is the real thing!