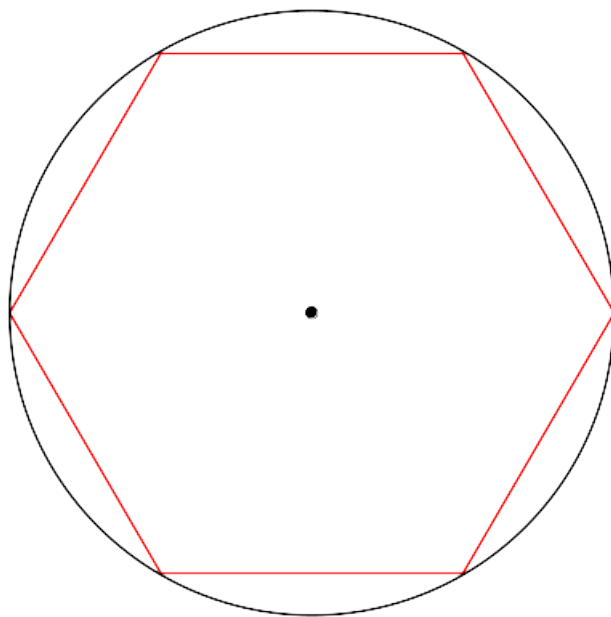**Mathematics 2260H – Geometry I: Euclidean Geometry**
Trent University, Winter 2021
Assignment #1 – Hex-agony?
Due on Friday, 22 January.

1. Suppose one is given a circle and its centre in the Euclidean plane. Using the more complete version of Euclid's postulates given in the handout *Euclids Postulates Extended*, show how to construct a regular hexagon* inscribed† in the given circle. Make sure to explain why your construction works as part of the construction or separately. *[10]*

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* A *regular polygon* is a polygon in which all the sides are the same length and all the interior angles are equal to each other.

† A polygon is *inscribed* in a circle if all of its vertices are on the circle.