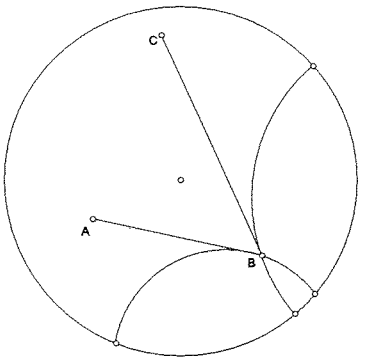
Angle Measure in Hyperbolic Geometry

Given an H-*angle*, we form an angle in the Euclidean plane using two tangent rays. We define the measure of the H-angle to be the measure of the Euclidean angle formed by the tangent rays.



The *defect* of an H-triangle ΔABC, denoted by $\delta(\Delta ABC)$, is defined as follows:
$\delta(\Delta ABC), = 180^0 - m(\angle A) - m(\angle B) - m(\angle C)$.

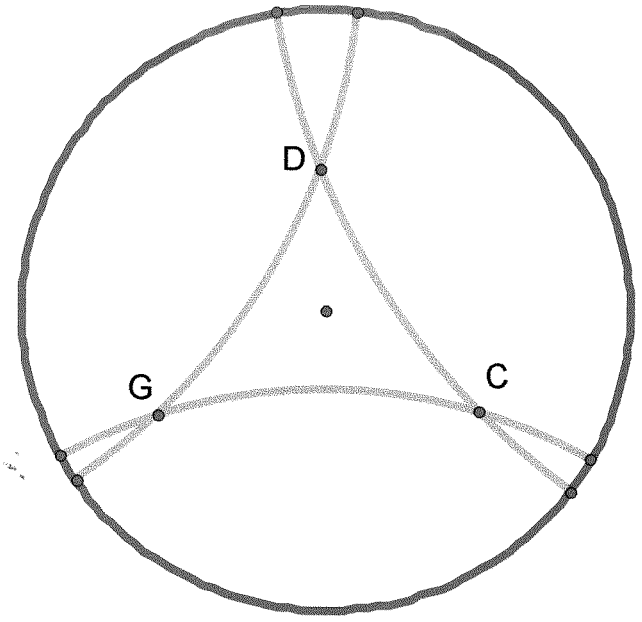
Some Sample Theorems in Hyperbolic Geometry

(1) No quadrilateral is a rectangle.

(2) For any triangle, the sum of the degree measures of its angles is always strictly less than 180.

(3) Two figures cannot have exactly the same shape unless they are congruent.

(4) The area of a triangle is equal to its defect.



$m\angle LCK + m\angle RDN + m\angle PGT = 97.65^\circ$