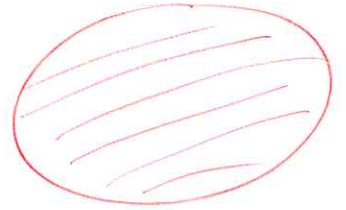


A model for Hyperbolic Geometry

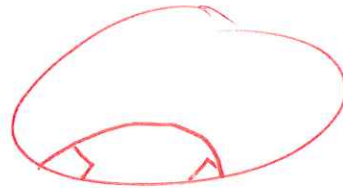
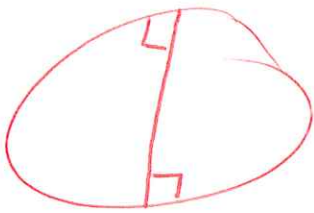
Poincaré disk

- ① points are all Euclidean points inside unit circle

$$\{ (x,y) : x^2 + y^2 < 1 \}$$

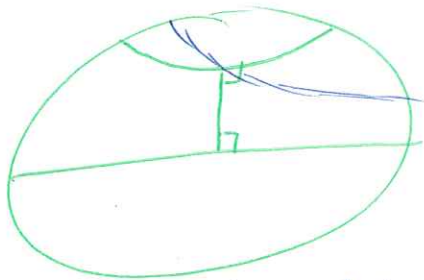


- ② lines are either
 diameters of unit circle
 or ^{Euclidean} circular arcs \perp unit circle

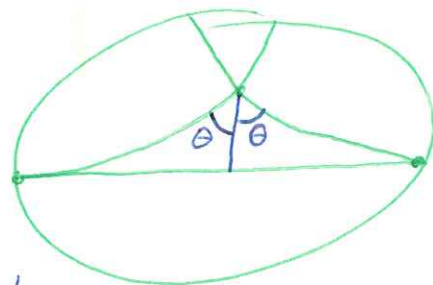


parallel lines

angle of parallelism



\Rightarrow hyperbolic parallel postulate



not an intersection!

- ③ angles are Euclidean angles

