

Spherical geometry (double elliptic geometry)

- ① points = points on unit sphere
- ② lines = ^(arcs of) n great circles on unit sphere

⇒ ① ^(distinct) all n lines intersect in 2 pts
 (replaces parallel postulate, SMSG 16)

② 2 points which are not antipodal determine
a unique great circle & hence
2 lines _{segments} (replaces SMSG 1) (incidence)

③ All lines are boundless and finite
(replaces SMSG 3 - ruler)
real line \mapsto real line mod 2π
"ruler mod 2π "

plane separation OK
distance OK

Facts: angle sum > 180
 \exists rectangles