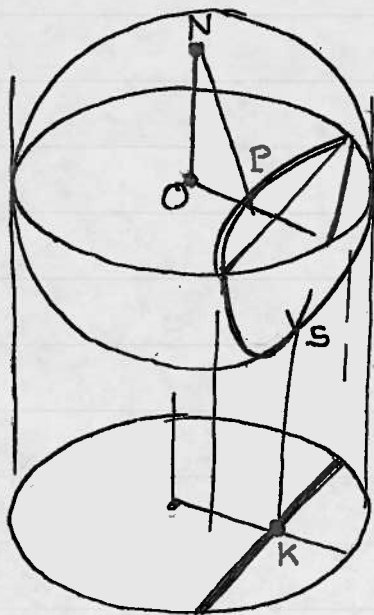


M302 Klein and Poincaré Models.

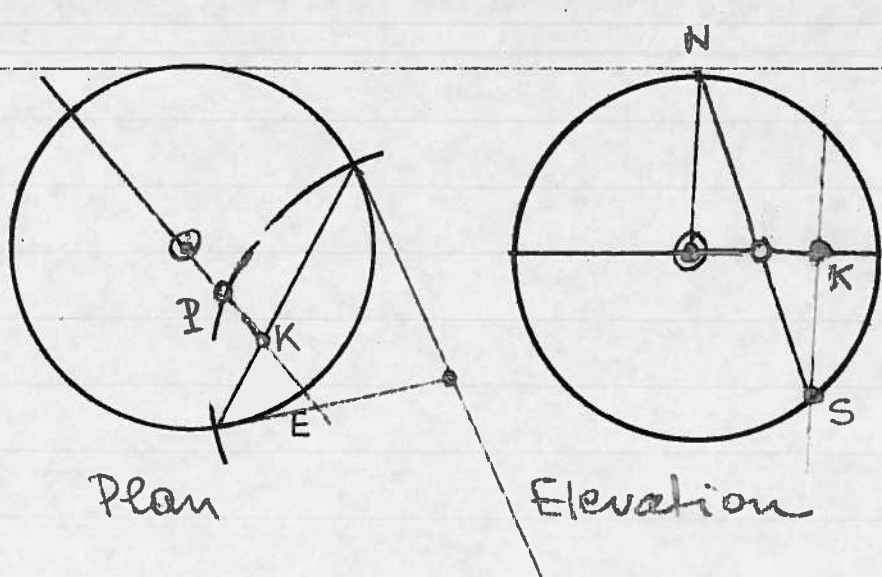
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Here is a picture worth learning how to draw.



1. Draw a fat ellipse inside a circle representing the equatorial xy plane in xyz space.
2. Drop this equatorial disc down to get a separate copy of the K-model.
3. Draw one line in the K-model and raise it to the xy -disc.
4. Sketch the vertical semicircle on the southern hemisphere where the vertical plane above the K-line cuts the hemisphere.

5. Sketch the origin O , the axis and north pole N .
6. The K -point K projects to a point S on the hemisphere.
7. Seen from the north Pole, the right line cuts the equatorial disc at P - which is "further in" than K .
8. The rest of the line projects to some curve (a circular arc) in the Poincaré Model.



Here are the constructions seen from above "plan" and from the side, "elevation".