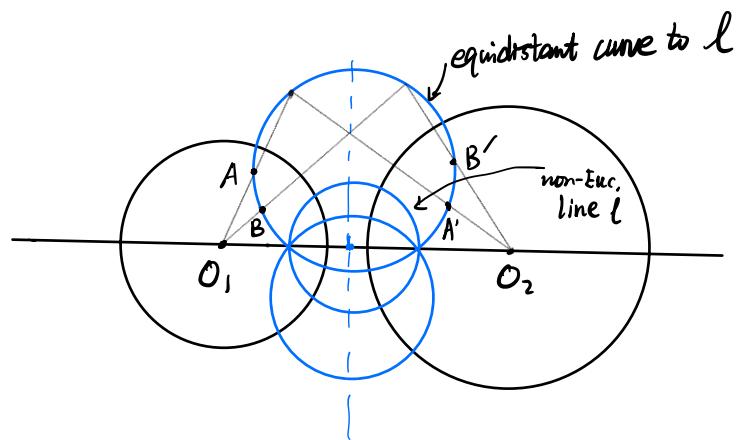
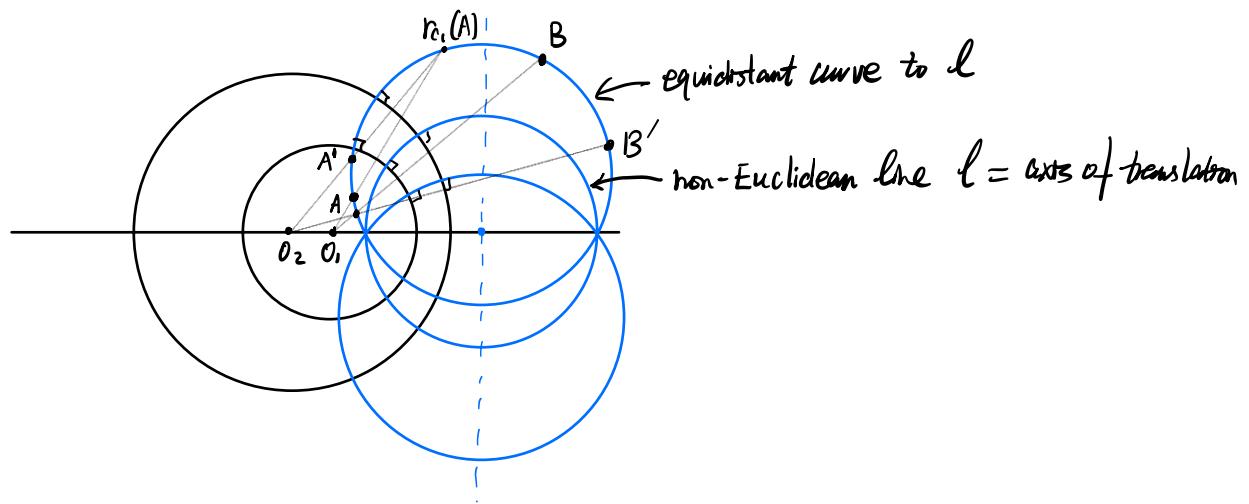
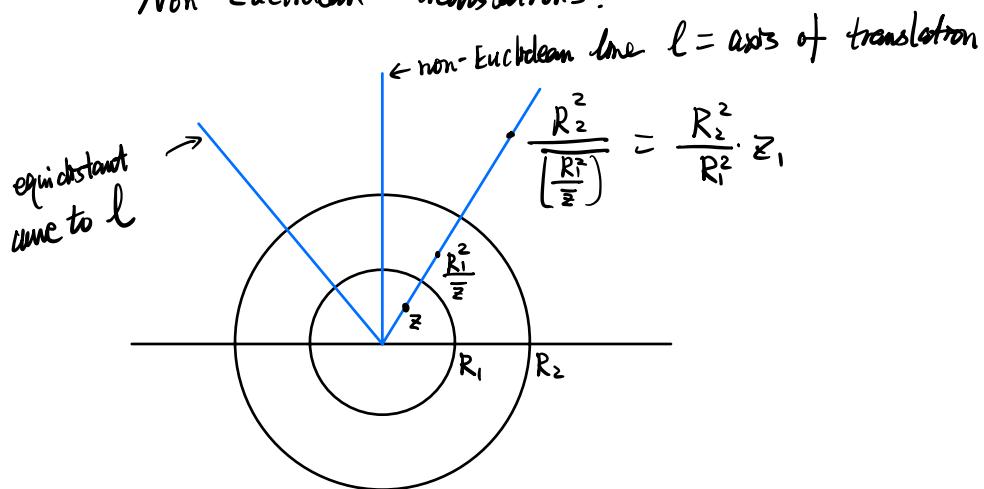
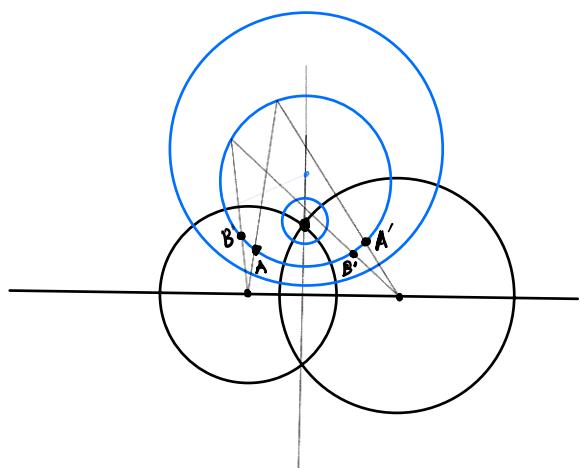


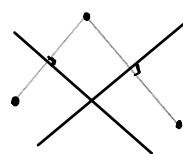
### Non-Euclidean translations.



Non-Euclidean rotations



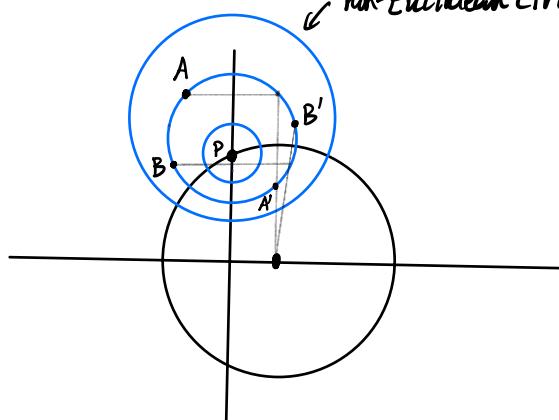
Euclidean rotation



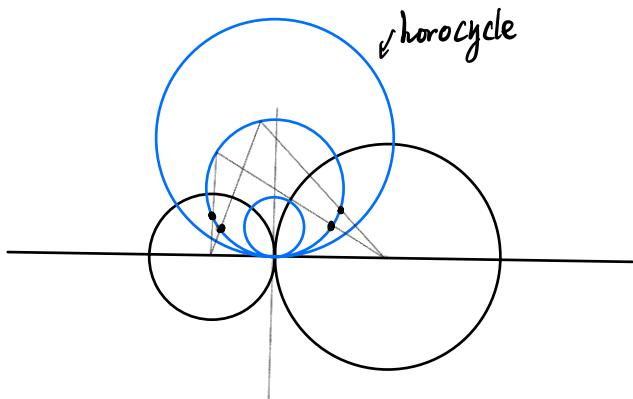
non-Euclidean circle with center P



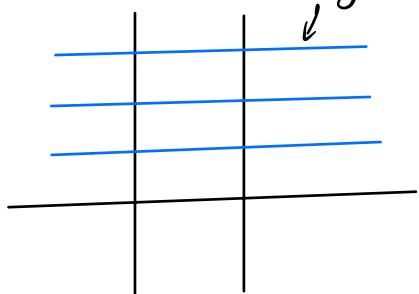
Euclidean center



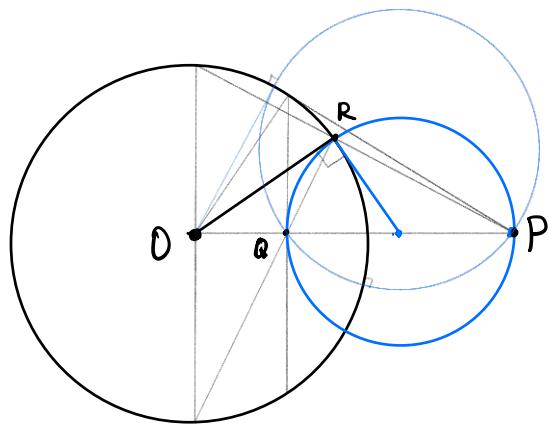
horocycle



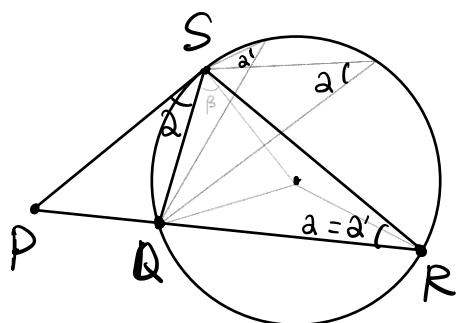
horocycle



- Reflection in circles by using Euclid Geometry:



$$|OR|^2 = |OQ| \cdot |OP|$$



$$\triangle PQS \sim \triangle PSR$$

↓

$$\frac{|PQ|}{|PS|} = \frac{|PS|}{|PR|}$$

↓

$$|PS|^2 = |PQ| \cdot |PR|$$

$$\left. \begin{array}{l} \alpha + \beta = \frac{\pi}{2} \\ 2\alpha' + 2\beta = \pi \end{array} \right\} \Rightarrow \alpha = \alpha'$$