1. Suppose $H$ is a hyperbolic hexagon with equal angles $\theta$. What is it's area as a function of $\theta$ ? You may assume that the area of an asymptotic triangle is $\pi$.
2. Suppose $z, w \in \mathbb{C}$ and that $w \neq z$ and $w \neq z^{d}$. Show that ( $w, w^{d}, z, z^{d}$ ) is real. Conclude that $w^{d}$ is on the Möbius line determined by $z, w$ and $z^{d}$. Hint: Multiply the top and bottom by $\bar{w} \bar{z}$ and simplify.
