

ABSTRACT. Let \mathbb{R}^n be an n -dimensional Euclidean space and \mathbb{D}^n be an n -dimensional hyperbolic space with the Poincaré metric for $n > 1$. In this paper, we shall prove the following results. (i) A bijection $f : \mathbb{D}^n \rightarrow \mathbb{D}^n$ is an isometry (Möbius transformation) if and only if f is triangle preserving. (ii) A bijection $f : \mathbb{R}^n \rightarrow \mathbb{R}^n$ is an affine transformation if and only if f is triangle preserving.