

1042-30-144

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(bernie@math.sunysb.edu). *Isometries of hyperbolic space as commutators.*

It is well known that every (orientation preserving) isometry of hyperbolic 3-space is the product of two half-turns (orientation preserving involutions), and hence every element is a commutator. On the other hand, in dimension two there are elements that are not products of half-turns yet every element is a commutator. We consider the situation in higher dimensions and precisely determine which isometries can be expressed as the product of two half-turns. We show that every isometry is the product of either two or three half-turns. As a consequence, the commutator length of the isometries of hyperbolic space is one. Along the way, we determine answers to similar questions for spherical and Euclidean isometries. (Received August 16, 2008)