

1125-51-589

Jacob Shulkin* (jshulkin@umich.edu), 931 Greenwood Ave, Apt 4, Ann Arbor, MI 48104.

Collineation Maps Between Tori.

The classical Fundamental Theorem of Affine Geometry states that for $n \geq 2$, any bijection of n -dimensional Euclidean space that maps lines to lines (as sets) is given by an affine map. Analogous statements have since also been proven in projective and hyperbolic geometry. We consider the space-form analogue of the above problem, and solve it for tori: Any bijection of an n -dimensional torus ($n \geq 2$) that maps lines to lines, is given by an affine map. This talk is based on joint work with Wouter Van Limbeek (University of Michigan). (Received September 07, 2016)