

1061-14-169

Fuensanta Aroca* (fuen@matcuer.unam.mx), Instituto de Matemáticas UNAM, Apartado Postal 273., Admon. de correos #3, 62251 Cuernavaca, Morelos, Mexico. *Tropical Geometry in arbitrary rank*. Preliminary report.

Valuations into the real numbers are just a particular type of valuations called classical. In 1932 W. Krull extended the classical definition considering valuations with values in an arbitrary ordered group. Krull's definition is the one currently used in most articles and reference texts. Replacing \mathbb{R} by another totally ordered group Γ , the tropical semi-ring $G := \Gamma \cup \{\infty\}$ may be defined naturally. The same happens with the concept of tropical hypersurface and the tropicalization of a polynomial.

We will discuss kapranow's theorem and the balancing condition in this context. (Received April 12, 2010)