

1131-13-76

Brittney Falahola and **Thomas Marley*** (tmarley1@unl.edu), Department of Mathematics,
University of Nebraska-Lincoln, Lincoln, NE 68502. *Characterizing Gorenstein rings using
iterations of the Frobenius endomorphism.*

We give several characterizations of Gorenstein local rings by considering the action of Frobenius on an arbitrary bounded complex (not necessarily with finitely generated homology) of finite injective dimension and such that the maximal ideal is in its small support. Two examples of such complexes are the injective hull of the residue field (concentrated in degree zero) and a dualizing complex. (Received July 03, 2017)