

1131-13-198

Justin Chen* (jchen@math.berkeley.edu). *Mono: an algebraic study of torus closures*. Preliminary report.

Given an ideal I in a polynomial ring, let $\text{mono}(I)$ denote the largest monomial ideal contained in I . We study mono as an interesting operation in its own right, guided by questions that arise from comparing the Betti tables of I and $\text{mono}(I)$, especially in the case that I is Artinian graded. For instance, how similar are the shapes of the Betti tables of I and $\text{mono}(I)$? Does I Gorenstein imply $\text{mono}(I)$ Gorenstein, or conversely? To what extent is taking mono non-unique? We give many examples to illustrate these questions and their answers. (Received July 14, 2017)