1165-13-217 **Logan Gray** and **W. Frank Moore*** (`moorewf@wfu.edu`). *Computational Aspects of the Classification of Perfect Ideals of Grade 3.* Preliminary report.

Let $(R, \mathfrak{m}, k)$ be a local ring. In two separate papers (and using quite different techniques), Weyman, and Avramov-Kustin-Miller classified those Tor algebras that arise as $\mathrm{Tor}_R(R/I, k)$ where I is a perfect ideal of R of grade three. In both papers, there are explicit 'canonical' bases describing the multiplication table of the Tor algebra. In this report, we demonstrate how one may go about finding such canonical bases using a software system such as `Macaulay2`. (Received January 18, 2021)