Portfolio writing assignments are considered a best practice for introducing students to mathematical writing. The assessment method used for portfolios is crucial, since it provides incentives which strongly affect students’ decisions.

We describe an assessment system, created specifically for portfolio problems, which makes a useful distinction between “significant” and “minor” errors. This helps focus students’ attention on the most important aspects of mathematical writing and gives a sense of scale to feedback. It also separates mathematical issues from writing style and offers useful formative feedback to students. This system is extremely flexible and can be used consistently across many different assignments and woven deeply into a course’s structure.

We will describe this system’s implementation in two settings: the University of Minnesota Talented Youth in Mathematics Program (UMTYMP, an accelerated calculus sequence for talented high school students), and a first year calculus course populated with scientists and engineers at Grand Valley State University. We will provide advice for integrating the system deeply into a course, give examples of its use, and reflect on its strengths and weaknesses. (Received September 16, 2014)