

1056-Z1-1992

Janet L. Braunstein* (janet.braunstein@usma.edu), Department of Mathematical Sciences, United States Military Academy at West Point, 646 Swift Road, West Point, NY 10996, and **Edward W. Swim** (edward.swim@usma.edu), Department of Mathematical Sciences, United States Military Academy at West Point, 646 Swift Road, West Point, NY 10996. *Can Instructors Award Partial Credit on Multiple Choice Questions?*

Although it is not yet a common practice, introducing multiple choice questions with answers worth differing point values can be an effective, and efficient, way to fairly assess students. This approach has been successfully implemented in three of our first-year courses, differential calculus (for students in our standard track) and multivariable calculus and ordinary differential equations (for students in our advanced track). We share our motivation for introducing this method, as well as the process behind selecting the answer choices and determining their respective weights. Multiple choice questions with the potential for partial credit have been found to be especially useful in testing students' ability to interpret results obtained using a computer algebra system without putting the technology itself into the students' hands during the exam period. We discuss pros and cons encountered in our implementation thus far, along with suggestions for future improvement. We include actual test questions used in all three courses. Although the content of our examples is restricted to the aforementioned topics, the strategies behind the creation of the questions, answers, and point assignments may naturally be applied to testing in other mathematical subject areas. (Received September 22, 2009)