

Pedagogy on Integral Notation: Defending the Differential

Michael W. Ecker, Pennsylvania State University, Wilkes-Barre Campus

Michael W. Ecker (DrMWEcker@aol.com or MWE1@psu.edu) is an associate professor of mathematics at Pennsylvania State University's Wilkes-Barre campus. Having taught math since 1972, he received his Ph.D in mathematics from the City College of New York in 1978. He was the founder of The Mathematical Review problem section in 1981, a position he held until 1997. He is the author of over 500 newsletters, columns, reviews, and articles, many computer-related, as well as five books and/or solutions manuals. His other passions include racquetball, sweets, and Renee (Wife 2.0).

Abstract

It seems that at least once every decade, somebody publishes a diatribe against the differential dx in the integral notation, $\int f(x) dx$. When I wrote a solution manual for a survey math text back in 1993, I noted that the author refused to use the differential in the text where he had an introduction to integral calculus. Although I would not have included calculus in such a course at all, I would have at least used correct notation. I wound up insisting on including the differential in my solutions, despite the poor editor's understandable plea for consistency with the author.