Distributions: How (and why) to differentiate discontinuous functions

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ABSTRACT

In some scientific and engineering computations, it is helpful to pretend as if discontinuous functions were differentiable. The theory of distributions allows one to turn this fantasy into reality. Essentially, we embed the set of functions inside a larger set of “generalized functions”, where derivatives always exist.

Prerequisites: Calc II, Linear Algebra.

If you are interested in giving a talk, or want further information, please contact Jeff Adler (adler@uakron.edu, 330-972-OPRY).

http://www.math.uakron.edu/~adler/seminar