

1023-Q1-1776 **Mark Bridger*** (bridger@neu.edu), Mathematics Department, Northeastern University, Boston, MA 02115. *A Constructive Approach to Real Analysis*.

Starting the course by constructing the reals using rational interval arithmetic provides a beginning with scientific applications. This also makes an introduction to “proof writing” much more pleasant, since there is no additional distraction of unfamiliar formalisms (such as Dedekind cuts and Cauchy sequences).

Emphasizing *uniform* continuity and *uniform* differentiability highlights the concepts that are truly important in modern functional analysis. Giving direct proofs, especially in establishing existence, makes sense to students—in math, science, and computer science equally.

This approach has worked in my analysis class for 15 years, and I’ve just written a textbook incorporating these ideas. (Received September 26, 2006)