1125-VB-1315   **Bryan Dawson*** (`bdawson@uu.edu`). *A New Extension of the Riemann Integral.*

Using the hyperreals, a new extension of the Riemann integral is introduced in which every bounded function is integrable and for which there exists a function $g : [0, 1] \to \mathbf{R}$ simultaneously satisfying (1) g is integrable, (2) g is unbounded on every subinterval of $[0, 1]$, and (3) g is identical to its average value function. (Received September 16, 2016)