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Sammanfattning

The standard example for showing that not all functions are Riemann integrable is the characteristic function of the rational numbers on the interval $[0, 1]$. Even though the Riemann integral is a strong tool when dealing with so called "easy functions", it was early on realized that stronger, more general techniques of integration were needed. There are several integrals of different strengths, and I present, in this paper, the definitions of, and some important properties for, along with comparisons between, the Riemann, Lebesgue, Denjoy and Henstock integrals.