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**Kurt Kreith\*** ([kkreith@ucdavis.edu](mailto:kkreith@ucdavis.edu)), Department of Mathematics, University of California, 1 Shields Ave., Davis, CA 95616-8633. *The Role of "A Fundamental Theorem of Summation" in Calculus Instruction (Preliminary Report)*. Preliminary report.

A formalistic approach to calculus instruction can obscure the fact that the Fundamental Theorem of Calculus has rather elementary and transparent roots. Preliminary inquiry suggests that many students (and teachers) have difficulty in relating this cornerstone of the subject to its discrete counterpart. The fact that a "Fundamental Theorem of Summation" is both useful and historically relevant can contribute to efforts to re-think calculus instruction in the time of computers. (Received June 15, 2006)