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Christopher Bay* (christopherbay@gmail.com). *Rearranging Almost Convergent Sequences.*

Students encounter convergence of infinite sequences and series early in a first course in analysis. Sometimes more general summability methods for series are briefly discussed, such as those of Abel and Cesaro. These methods are extensions of the concept of convergence for series in that they provide a way of summing divergent series. Almost convergence is an extension of convergence of sequences. It arises due to the introduction of Banach limits, which are a consequence of the Hahn-Banach Theorem. We investigate how almost convergent (AC) sequences behave with respect to rearrangements. While the behavior of convergent sequences and series when rearranged is well understood and quite simple, AC sequences are much more interesting in this regard. Many examples are provided, and the main result is a condition for when a rearrangement preserves almost convergence and AC limits. (This undergraduate research was carried out at Truman State University.) (Received August 30, 2005)