



Mathematical Physics

# Sums of alternating products of Riemann zeta values and solution of a Monthly problem

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We solve problem 11585 proposed by B. Burdick, AMM June-July 2011 (118) (6), p. 558 for the sum of certain products of Riemann zeta function values. We further point out an alternating sum analog, and then present and prove different alternating sum analogs. In addition, we present summation by parts and other results for the Hurwitz and Riemann zeta functions and for the digamma and trigamma functions.

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