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Hasan Coskun* (hasan_coskun@tamu-commerce.edu), 2600 S Neal St, Department of Mathematics, Commerce, TX 75429. *Multilateral basic hypergeometric summation identities and hyperoctahedral group symmetries.*

We give new proofs for certain bilateral basic hypergeometric summation formulas using the symmetries of the corresponding series. In particular, we present proofs for Ramanujan's ${}_1\psi_1$ sum and Bailey's ${}_3\psi_3$ summation formula as applications. We also construct multiple series analogues of these identities considering hyperoctahedral symmetries of higher ranks. (Received February 22, 2010)