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A use of symmetry: generalization of an integral identity found by M. L. Glasser.

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Summary: The integral identity found by *M. L. Glasser* [J. Phys. A, Math. Theor. 44, No. 22, Article ID 225202, 5 p. (2011; Zbl 1252.33012)] is generalized using the permutation symmetry of coordinates of an n-spherical surface simplex. The first calculation technique is simple to apply, but the second technique allows further generalization of M. L. Glasser's identity. Analogous results are discussed for the n-hemispherical surface of the unit n-sphere and for the entire surface of the n-sphere. The n-sphere surface result is used to generalize M. L. Glasser's solution to a problem proposed by *J. R. Bottiger* and *D. K. Cohoon* ["A normalization constant", SIAM Review 29, 302–303 (1987)].

Classification: I55
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