

1023-28-859

Javad Namazi* (namazi@fdu.edu), Madison, NJ 07940. *A Generalized Wallis Formula*. Preliminary report.

We will prove a generalized version of the Wallis formula. Let S^{n-1} be the unit sphere in R^n with $d\sigma$ its surface measure. Let α be a multi-index. Then

- i) $\int_{S^{n-1}} \xi^\alpha d\sigma = 0$, if any α_i is odd. In particular, the integral equals zero if $|\alpha|$ is odd.
- (ii) $\int_{S^{n-1}} \xi^{2\alpha} d\sigma = \frac{(2\alpha)!2\pi^{n/2}}{2^{2|\alpha|}\alpha!\Gamma(n/2+|\alpha|)}$, $|\alpha| \geq 0$. (Received September 22, 2006)