

**FORMULA 3.461.4**

$$\int_{-\infty}^{\infty} (x + ia)^{2n} e^{-x^2} dx = \frac{n! (2n-1)!! \sqrt{\pi}}{2^n} \sum_{k=0}^n (-1)^k \frac{(2a)^{2k}}{(2k)! (n-k)!}$$