

FORMULA 4.241.5

$$\int_0^1 \sqrt{(1-x^2)^{2n-1}} \ln x \, dx = -\frac{(2n-1)!!}{(2n)!!} \frac{\pi}{4} \left( 2 \ln 2 + \sum_{k=1}^n \frac{1}{k} \right)$$