

FORMULA 4.241.1

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