

FORMULA 4.231.17

$$\int_0^1 \ln x \frac{1 + (-1)^n x^{n+1}}{(1+x)^2} dx = -(n+1) \frac{\pi^2}{12} - \sum_{k=1}^n (n-k+1) \frac{(-1)^k}{k^2}$$