FORMULA 4.271.6

$$\int_0^1 \frac{(\ln x)^{2n}\,dx}{1+x^2} = \frac{1}{2}\int_0^\infty \frac{(\ln x)^{2n}\,dx}{1+x^2} = \frac{\pi^{2n+1}}{2^{2n+2}}|E_{2n}|$$