

FORMULA 4.292.5

$$\int_0^1 \frac{\ln(1+ax)}{x\sqrt{1-x^2}} dx = \frac{1}{2} \arcsin a(\pi - \arcsin a) = \frac{\pi^2}{8} - \frac{1}{2} \arccos^2 a \quad |a| \leq 1$$