

PROOF OF FORMULA 4.295.11

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

The change of variables $t = 1 - x^2$ gives

$$\int_0^1 \frac{\ln(1-x^2)}{x} dx = \frac{1}{2} \int_0^1 \frac{\ln t}{1-t} dt$$

and this last integral appears as entry 4.231.2.