

PROOF OF FORMULA 4.211.1

$$\int_e^\infty \frac{dx}{\ln 1/x} = -\infty$$

Let $t = \ln x$ to obtain

$$\int_e^\infty \frac{dx}{\ln 1/x} = - \int_1^\infty \frac{e^t}{t} dt.$$

The result now follows from $e^t \geq t$.