

FORMULA 3.411.14

$$\int_0^{\infty} \frac{x^2 e^{-nx}}{1 - e^{-x}} dx = 2 \sum_{k=n}^{\infty} \frac{1}{k^3} = 2 \left(\zeta(3) - \sum_{k=1}^{n-1} \frac{1}{k^3} \right)$$