

ENTRIES IN PART 8

$$4.351.1 \quad \int_0^1 (1-x)e^{-x} \ln x \, dx = \frac{1-e}{e}$$

$$4.351.2 \quad \int_0^1 e^{\mu x}(\mu x^2 + 2x) \ln x \, dx = \frac{(1-\mu)e^\mu - 1}{\mu^2}$$

$$4.353.3 \quad \int_0^1 (\mu x + n + 1)x^n e^{\mu x} \ln x \, dx = e^\mu \sum_{k=0}^n \frac{(-1)^{k-1} n!}{(n-k)! \mu^{k+1}} + \frac{(-1)^n n!}{\mu^{n+1}}$$

$$4.362.1 \quad \int_0^1 x e^x \ln(1-x) \, dx = 1 - e$$