\[ \sum_{n=1}^{\infty} \frac{e^n}{3^{n-1}} = 3 \sum_{n=1}^{\infty} \left(\frac{e}{3}\right)^n \] is a geometric series with first term \(3(e/3) = e\) and ratio \(r = \frac{e}{3}\). Since \(|r| < 1\), the series converges. Its sum is \(\frac{e}{1 - e/3} = \frac{3e}{3 - e}\).