1. Show that $\displaystyle\int_1^\infty \frac{1}{e^x + 2}\, dx$ converges. Then find a definite integral that approximates it to within 10^{-10} of its actual value.

2. Show that $\displaystyle\int_1^\infty \frac{1}{x^4 + x}\, dx$ converges, and approximate its value accurate within 0.0001.

 Sklensky