1. Let $f(x) := \frac{1}{x}$. Then estimate give an upper bound on $\int_{1}^{3} f(x) dx$ by splitting the interval [1,3] into four equal length subintervals and computing the upper sum.

Upper bound =

2. Compute $\int_{1}^{3} f(x) dx$ using your calculator. $\int_{1}^{3} f(x) dx =$ _____