Suppose a random variable $x$ is uniformly distributed in the interval $[\alpha, \beta]$ with $\alpha, \beta > 0$.

1. Find the expectation value of $A = 1/x$.
2. Find the expectation value of $B = x$.
3. Compare the values $A$ and $1/B$ for $\alpha = 1$, and $\beta = 2$. 