

IB Algebra and Numbers Problem 001

An arithmetic sequence is such that $u_1 = \log_c(p)$ and $u_2 = \log_c(pq)$ where $c > 1$, and $p, q > 0$.

A. Show that $d = \log_c(q)$.

B. Let $p = c^2$ and $q = c^3$. Find the value of $\sum_{n=1}^{20} u_n$.