Bilkent University
Department of Mathematics

Problem Of The Month

Term: September 2011

Let $a_1 = 1, a_2 = 1$ and $a_n = a_{n-1} + a_{n-2}$ for each $n > 2$. Find the smallest real number A satisfying

$$\sum_{i=1}^{k} \frac{1}{a_i a_{i+2}} \leq A$$

for any natural number k.