

University of Colorado
Department of Mathematics
Problem of the Month
December 2010/January 2011

Define the sequence $\{a_n\}$ by $a_0 = 1$ and

$$a_n = \sum_{i=0}^{n-1} \frac{a_i}{(n-i)!}$$

for $n \geq 1$. Compute

$$\lim_{n \rightarrow \infty} (\ln 2)^n a_n.$$