Algorithmic Combinatorics
Exercises discussed on May 27, 2019

43. Compute a hypergeometric closed form of the sum $s_n = \sum_{k=0}^{n} \frac{4}{(2k-1)(2k+1)}$ by applying Gosper's algorithm.

44. Show that the harmonic numbers are not hypergeometric using Gosper's algorithm.

45. For which values of α is $a_k = \binom{2k}{k}\alpha^k$ Gosper summable? Compute $\sum_{k=0}^{n} a_k$ for the admissible values of α.