

1064-37-106

Magnus Aspenberg and **Rodrigo A Perez*** (rperez@math.iupui.edu), LD-224R, 401 N. Blackford St., Indianapolis, IN 46074. *Control of cancellations, growth, and Catalan numbers.*

We study a recursion that generates real sequences depending on a parameter x . For negative x the growth of the sequence is very difficult to estimate due to canceling terms. We reduce the study of the recursion to a problem about a family of integral operators, and prove that for every parameter value except -1 , the growth of the sequence is factorial. In the combinatorial part of the proof we show that when $x = -1$ the resulting recurrence yields the sequence of alternating Catalan numbers. (Received September 01, 2010)