1103-18-110   **Geoff Cruttwell*** (`gcruttwell@mta.ca`), Department of Mathematics and Computer Scienc,
Mount Allison University, Sackville, NB E4L3B5, Canada. *Counting finite categories.* Preliminary
report.

In this talk, I'll be interested in a combinatorial question: how many categories are there with n arrows (up to iso-morphism)? The online encyclopedia of integer sequences only lists values for n up to 6, and attempting to count such categories with simple programs stops at about that number.

In the talk, I'll describe computational techniques to allow us to extend this count up to categories with 10 arrows, and how this data leads to a conjecture for a general asymptotic formula for the number of categories with n arrows. I'll also discuss the question of looking at categories up to equivalence, and counts for the number of Cauchy-complete categories.

This is joint work with Rejean LeBlanc. (Received August 15, 2014)