1096-AC-806 **Kevin B Ford** (ford@math.uiuc.edu), Department of Mathematics, 1409 West Green Street, University of Illinois at Urbana Champaign, Urbana, IL IL 61801, **Florian Luca*** (fluca@matmor.unam.mx), Instituto de Matematicas, UNAM, 04510 Mexico City, Mexico, and **Carl B Pomerance**, Mathematics Department, Dartmouth College, Hanover, NH 06755.

Counting integers with special properties.

Take your favorite infinite set of positive integers (primes, squares, Fibonacci numbers) and count how many of them are below a certain bound x. The answer is easy to get in some cases (like the case of the squares) and can be quite difficult in others (like in the case of primes). In my talk, I will mention a few of Paul Erdos' favorite numbers to count, like the numbers below x^2 arising as a result of a multiplication of two numbers each at most x, as well as the ranges of the Euler function $\phi(n)$ and its lesser studied cousin the Carmichael function $\lambda(n)$. The number $1-(1+\ln\ln 2)/\ln 2$ appears in a mysterious way in some of these unrelated problems. Most of the talk is expository and based on known results but we will mention some recent results obtained in joint work with K. Ford and C. Pomerance. (Received September 10, 2013)