

1014-13-522

Jean-Luc Chabert* (jean-luc.chabert@u-picardie.fr), LAMFA UMR 6140, 33 rue Saint Leu, 80039 Amiens, France. *A generalization to Dedekind domains of an Erdős inequality connected to $n!$.*

In 1946, P. Erdős remarked the following inequality connected to $n!$. Write $n! = \prod_p p^{\alpha_p(n)}$. Whatever the primes p and q , if $\alpha_p(n) > \alpha_q(n)$, then $p^{\alpha_p(n)} > q^{\alpha_q(n)}$. The notion of factorials has been generalized to every number field and, more generally, by M. Bhargava, to every Dedekind domain. We show that an analogous property still holds for the factorials of every Dedekind domain. (Received September 19, 2005)