Analele **Univ**ersităţii **Bucureşti**, **Mat**ematică
Anul LII, Nr. 1(2003), pp. 55–64

A few inequalities involving $\pi(x)$

Gabriel MINCU

Abstract : We are concerned with inequalities of the types: $\pi(m+n) \leq a\pi(m/a)+\pi(n)$, $\pi(m+n) \leq a(\pi(m/a)+\pi(n/a))$ (both with $a = 1,04$) and $\pi(ax)+\pi(dx) < \pi(bx)+\pi(cx)$ with $0 < a < b < c < d$, $a+d = b+c$. We also prove the inequality $\pi(2n+\pi(n)) \leq 2\pi(n)$ for all $n \geq 37$.

Key words and phrases : inequalities for primes, Hardy-Littlewood conjecture, Landau's inequality
Mathematics Subject Classification (2000) : 11N05,11A41