
Zbl 131.04902**Erdős, Pál; Straus, E.G.***On the irrationality of certain Ahmes series* (In English)**J. Indian Math. Soc., n. Ser. 27, 129-133 (1963).**

The authors prove that if n_1, n_2, \dots is an increasing sequence of positive integers such that (i) $\limsup n_k^2/n_{k+1} \leq 1$ and (ii) the sequence $\{N_k/n_{k+1}\}$ is bounded, N_k denoting the least common multiple of n_1, n_2, \dots, n_k , then $\sum 1/n_k$ is rational if and only if $n_{k+1} = n_k^2 - n_k + 1$ for all $k \geq k_0$. The authors proceed to examine how far conditions (i) and (ii) are necessary and prove, in particular, that (ii) can be replaced by

$$\limsup(N_k/n_{k+1})\{n_{k+2}^2/n_{k+2} - 1\} \leq 0.$$

Finally three specific examples of irrational Ahmes series $\sum 1/n_k$ are given, one being due to *S.W. Golomb* (Zbl 115.04501).

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Classification:

11J72 Irrationality