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Erdős-Turán Type Inequalities

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Abstract: Denoting by $(r_n)_{n \geq 1}$ the increasing sequence of the numbers p^α with p prime and $\alpha \geq 2$ integer, we prove that $r_{n+1} - 2r_n + r_{n-1}$ is positive for infinitely many values of n and negative also for infinitely many values of n . We prove similar properties for $r_n^2 - r_{n-1}r_{n+1}$ and $\frac{1}{r_{n-1}} - \frac{2}{r_n} + \frac{1}{r_{n+1}}$ as well.



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