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Additive properties of the sequence $(r_n)_{n \geq 1}$

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Abstract - Let $(r_n)_{n \geq 1}$ be the increasing sequence consisting of the elements of the set $\{p^\alpha \mid p \text{ prime}, \alpha \geq 2, \alpha \text{ integer}\}$. We prove that each r_n with $n \geq 7$ can be obtained from the preceding terms by additions or subtractions (maybe adding 1), and that every natural number $n \geq 32$ can be written as a sum of mutually distinct terms of the sequence $(r_n)_{n \geq 1}$.

Key words and phrases : Scherck's theorem, Richert's lemma

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