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On a sequence related to powerful numbers

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Abstract - We are concerned with some properties of the sequence a_n obtained from $u_n = \frac{n^2}{c^2} + a_n \sqrt[3]{n^5}$, u_n being the n^{th} powerful number and $c = \frac{\zeta(3/2)}{\zeta(3)}$. We show that the described sequence cannot have three consecutive equal terms, and we study some topics related to its convergence.

Key words and phrases : Powerful numbers, sequences, series.

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