

**Jakimczuk, Rafael****Sums of perfect powers.** (English) [Zbl 1285.11051](#)

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Summary: Let  $P_n$  be the  $n$ th perfect power. In this article we obtain asymptotic formulae for the sum  $\sum_{i=1}^n P_i$ . We also prove the following formulae

$$\sum_{i=1}^n \frac{1}{\sqrt{P_i}} = \log n + C + o(1), \quad \sum_{P_n \leq x} \frac{1}{\sqrt{P_i}} = \frac{1}{2} \log x + C + o(1),$$

where  $C$  is a constant.

**MSC:****11B83** Special sequences and polynomials**11N25** Distribution of integers with specified multiplicative constraints**Keywords:**

perfect powers; sums of perfect powers

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