Abstract

A subset $\mathcal{A} \subseteq \mathbb{N}_0$ is called a basis of order h if every positive integer can be represented as a sum of h members of $\mathcal{A}$. Thin bases of order h will be constructed in this paper, for each $h \geq 2$, where the value of $\limsup A(n)n^{-1/2}$ is smaller than that of thin bases known so far. To this end, a generalisation of bases of Stöhr's type, called UR-bases, is considered. In the most important case $h = 2$ it is shown that for UR-bases the result is best possible up to an $\varepsilon > 0$.

MSC (2000) *11B13