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*k-Fibonacci Numbers and k-Lucas Numbers in Beatty Sequences Gen-
erated by Powers of Metallic Means*,
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Abstract

For each positive integer k , denote the metallic mean $(k + \sqrt{k^2 + 4}) / 2$ by α_k . In this article, we give some new identities involving the k -Fibonacci numbers, the k -Lucas numbers, metallic means, the floor function, and fractional parts. We also provide some properties of the Beatty sequence $B(\alpha_k^n)$ generated by α_k^n , where n is any positive integer. Then these properties are used to show connections between k -Fibonacci and k -Lucas numbers and the sequence $B(\alpha_k^n)$.