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Abstract

In this paper, we present explicit formulas for the sum of the first n Tetranacci numbers and for the sum of the squares of the first n Tetranacci numbers. In the second half of the paper, we will prove an explicit formula for the sum of the first n Fibonacci m-step numbers. This formula will give us explicit expressions for the sum of the first n Pentanacci numbers, the first n Hexanacci numbers, the first n Heptanacci numbers, and so on.