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Binet's formula for generalized tribonacci numbers.

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Summary: In this note, we derive Binet's formula for the general term \mathcal{T}_n of the generalized tribonacci sequence. This formula gives \mathcal{T}_n explicitly as a function of the index n , the roots of the associated characteristic equation, and the initial terms \mathcal{T}_0 , \mathcal{T}_1 , and \mathcal{T}_2 . By way of illustration, we obtain Binet's formula for the Cordonnier, Perrin, and Van der Laan numbers. In addition, we establish a double identity that can be regarded as a parent of Binet's formula for generalized tribonacci numbers.

Classification: F65

Keywords: tribonacci numbers; generalized tribonacci sequence; characteristic equation; Binet's formula; symmetric function

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