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The arithmetico-geometric sequence: an application of linear algebra.

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Summary: In this paper, we present a linear algebra-based derivation of the analytic formula for the sum of the first n th terms of the arithmetico-geometric sequence. Furthermore, the advantage of the derivation is briefly discussed.

Classification: H60 I30

Keywords: sequence; recursive relation; arithmetico-geometric sequence; eigenvectors; eigenvalues

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