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*Matrices in the Hosoya Triangle*,  
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**Abstract**

In this paper, we use well-known results from linear algebra as tools to explore some properties of products of Fibonacci numbers. Specifically, we explore the behavior of the eigenvalues, eigenvectors, characteristic polynomials, determinants, and the norm of non-symmetric matrices embedded within the Hosoya triangle. We discovered that most of these objects either embed themselves within the Hosoya triangle, or they give rise to Fibonacci identities.

We also study the nature of these matrices when their entries are taken mod 2. As a result, we found an infinite family of non-connected graphs. Each graph in this family has a complete graph with loops attached to each of its vertices as a component and the other components are isolated vertices. The Hosoya triangle allowed us to show the beauty of both the algebra and geometry.