

Properties of Sierpinski Triangle Graphs

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The Sierpinski triangle can be modeled using graphs in two different ways, resulting in classes of graphs called Sierpinski triangle graphs and Hanoi graphs. The latter are closely related to the Towers of Hanoi problem, Pascal's triangle, and Apollonian networks. Parameters of these graphs have been studied by several researchers. We determine the number of Eulerian circuits of Sierpinski triangle graphs and present a significantly shorter proof of their domination number. We also find the number of diameter paths and the 2-tone chromatic number for both classes.

Keywords: Sierpinski triangle, Sierpinski triangle graph, Hanoi graph, Eulerian circuit, domination, diameter, 2-tone chromatic number