

## *Relating Limits and Infinite Geometric Series through Application*

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*One challenging aspect of introducing infinite series to a calculus-level student is presenting applications that are interesting and promote a deeper level of thinking of the composition and behavior of infinite series. Traditional application problems of infinite series are usually introduced when instructing geometric series, since these sums are easy to compute. However, many of these applications simply find the sum and ignore the infinite limit process. The activity that follows allows students to enhance their critical thinking about infinite series and the connection between the sum and infinite process.*

*One of the major goals of this investigation is to facilitate student comprehension of the relationship, similarities, and differences that exist among sequences (closed forms) and infinite series. Additionally, this study may better connect the relationship between infinite limits and infinite series. Finally, the intention is for students to investigate structures that contain forms of geometric series from both a numeric and analytical view.*