

2022. Kalman, Dan, Improved Approaches to Discrete and Continuous Logistic Growth.
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Abstract: In the precalculus curriculum, logistic growth generally appears in either a discrete or continuous setting. These actually feature distinct versions of logistic growth, and textbooks rarely provide exposure to both. In this paper, we show how each approach can be improved by incorporating an aspect of the other, based on a little known synthesis of the two approaches. The ultimate goal of the paper is to encourage precalculus instructors teaching either version of logistic growth to consider incorporating our proposed changes in their classes. Sample classroom materials are provided in the supplemental data, along with access to preprogrammed computer spreadsheets for student use and/or classroom demonstrations.

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Keywords: logistic, discrete, continuous, spreadsheet, precalculus