

Exploring Tangentoidal Functions

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This article introduces a generalization of the standard tangent function of the form $\sin x/(a + \cos x)$ where a is a constant. We also indicate ways that these functions can be incorporated into a precalculus course, both to reinforce the important behavioral properties of the tangent function, as well as to emphasize fundamental behavioral characteristics of functions in general, particularly vertical asymptotes. The ideas involve an effective dynamic interplay among graphical, numerical, and symbolic approaches to the subject.

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