

JCM APPLETS

The Applets on this page were developed as part of the Java Components for Mathematics project at Hobart and William Smith Colleges. Minor modifications were made to the Applets for their local adaptations.

The Family of

Graphs Applet is designed to look at families of functions. It graphs functions that include the three parameters a , b , and c in their definitions. These parameters are controlled by sliders.

The Function

Composition Applet links together the graph of two functions with the graph of the function defined by the composition of these two functions.

The Epsilon

Delta Applet is designed for a visual exploration of the Epsilon Delta definition of continuity. The user highlights an epsilon and delta band around a proposed limit of a function at a point.

The Secant

Tangent Applet examines how secant lines converge to a tangent line.

The First

Derivatives Applet ties together the graph of a function with the graph of its first derivative.

A Second

Derivative Applet ties together the graph of the function with the graphs of the first and second derivatives.

The Chain

Rule Applet is a modification of the Function Composition Applet. It show that the derivative of the composition of functions is the product of the derivatives taken at the appropriate points.

The Riemann Sums
Applet explores how Riemann sums converge to the definite integral.

The Vector
Fields Applet plots a vector field defined by a pair of functions in x and y .

The Integral
Curves Applet modifies the Vector Fields Applet and allows the user to plot integral curves to a vector field.

The Series
Grapher Applet graphs functions defined as series over k of terms in x and k .

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