

## Chapter 2 Technology Application Projects

### Mathematica-Maple Module

#### *Take It to the Limit*

##### Part I

##### Part II (Zero Raised to the Power Zero: What Does it Mean?)

##### Part III (One-Sided Limits)

Visualize and interpret the limit concept through graphical and numerical explorations.

##### Part IV (What a Difference a Power Makes)

See how sensitive limits can be with various powers of  $x$ .

### Mathematica-Maple Module

#### *Going to Infinity*

##### Part I (Exploring Function Behavior as $x \rightarrow \infty$ or $x \rightarrow -\infty$ )

This module provides four examples to explore the behavior of a function as  $x \rightarrow \infty$  or  $x \rightarrow -\infty$ .

##### Part II (Rates of Growth)

Observe graphs that *appear* to be continuous, yet the function is not continuous. Several issues of continuity are explored to obtain results that you may find surprising.