

## Chapter 12 Technology Application Projects

### Mathematica/Maple Module

#### *Using Vectors to Represent Lines and Find Distances*

**Parts I and II:** Learn the advantages of interpreting lines as vectors.

**Part III:** Use vectors to find the distance from a point to a line.

### Mathematica/Maple Module

#### *Putting a Scene in Three Dimensions onto a Two-Dimensional Canvas*

Use the concept of planes in space to obtain a two-dimensional image.

### Mathematica/Maple Module

#### *Getting Started in Plotting in 3D*

**Part I:** Use the vector definition of lines and planes to generate graphs and equations, and to compare different forms for the equations of a single line.

**Part II:** Plot functions that are defined implicitly.