Chapter 9
Tables

Although it can be somewhat painful and limiting, it is possible to build tables using EquationBuilder. In this chapter, we'll look at how we can make the following table from Appendix C:

paste_17.eps ¬

Tables from Matrices

Matrices have some interesting attributes that lend themselves well to building tables. Although this capability is very crude within EquationBuilder, we thought it might be useful to look at what is possible anyway, for lack of a better tool being available. In addition, this will

allow us to introduce some features not discussed in previous chapters, like alignment within matrices.

Since we do not wish to use italic characters in this ᵃequation,ᵒ switch off the Italicize Aa..Zz switch in the Equation Inspector. Next, create a Matrix and increase the number of columns to 8 (we'll explain why we need 8 columns in a moment).

Start filling out the matrix by clicking on the upper left ᵃ?ᵒ. Switch to the Operators & Calculus palette and press the integral button. Select the integral limits and delete them (see Chapter 8). Press return to advance the cursor to the next matrix position and type in ᵃintᵒ followed by return to advance the cursor to the third column.

Because the column separation is a bit small, insert a quad space in the third column (see Chapter 8), then go on to the the next matrix position and continue filling out the rest of the table. We use one quad space between each set of columns to properly space the table. This is why we need 8 columns instead of 6.

You probably have noticed that, by default, alignment of a matrix element is always centered. This, of course, can be changed through the use of the appropriate inspector. Select the ᵃintᵒ matrix element and bring up the Element Inspector. The **Matrix Element Alignment** box should appear at the very bottom:

ElementInspector.Matrix.tiff ¬

Switch the alignment of the selected element to left, then press ↓ (or equivalently, **Control-n**) to select the matrix element one row down (ªointº) and switch its alignment to left. Do this for the other columns with textual descriptions as well.

Our last task is to place a title on the table. One way to do this is to select the entire Matrix and then place a superscript on it. (Remember that you can create a superscript either by pressing the superscript button on the Element Creator panel or by selecting the entire Matrix and typing ª^º.) In the superscript, type ªLarge Operatorsº.

Now, select the entire equation and bring up the Attributes inspector. Because the entire matrix is a superscript/subscript combination, the **Super/Subscript Inspector** should become visible:

SuperSubscriptInspector.tiff ¬

Switch the **Limit Position** from the default (in this case to the side) to be above and below so that the title of the table is properly positioned and centered.

Next, select ªLarge Operatorsº and change the font type from Default to Bold using the Element

Inspector.

Finally, we need to finish off the table by adding some extra space between the ᵃ**Large Operators**ᵒ title and the Matrix of the table. One way to do this (among many), is to select the ᵃ**Large Operators**ᵒ superscript and make it the numerator of a vertical fraction by pressing the vertical fraction button or typing ᵃ/ᵒ. Put a space in the denominator (to fill out the fraction) and then select the entire fraction. Bring up the Fraction Inspector and switch the fraction to a vertical fraction without the horizontal bar. The space in the denominator then acts as an extra separator between the title and the table.