

# EquationBuilder 0.9b (119) Examples

## August 13, 1992

### Ex01.eqn

A simple equation highlighting the use of the  $\overset{\circ}{a}$  symbol on the Misc. Symbols palette.

### Ex02.eqn

Another simple equation demonstrating automatic scaling of delimiters, in this case parentheses.

### Ex03.eqn

An example demonstrating over and under braces. To see how things are structured, go into composition mode. Note that superscripts and subscripts on over and under braces are positioned above and below by default, rather than to the side.

(Example taken from the *LaTeX User's Guide & Reference Manual* by Leslie Lamport, copyright ©1986 by Addison-Wesley Publishing)

### **Ex04.eqn**

An example of working with matrices. The building of this equation is detailed in Chapter 5 of the manual.

(Example taken from *The TeXbook* by Donald E. Knuth, copyright ©1986 by the American Mathematical Society.)

### **Ex05.eqn**

An example of one way to typeset vectors using the default bold font. The building of this equation is detailed in Chapter 6 of the manual.

### **Ex06.eqn**

Use of integrals in in-line equations. (From Chapter 7 of the manual.)

### **Ex07.eqn**

A simple example of how to typeset multiline equations, as well as how to make evaluation limits. (From Chapter 8 of the manual.)

### **Ex08.eqn**

A very long equation that needs to be split over two lines. Since EquationBuilder does not automatically split equations, it is up to you to do so. Multiline elements are useful for this. In this example, there are 2 lines to the Multiline, with each line aligned vertically to the equals sign. A quad space was inserted at the beginning of the second line to offset the  $a \times^o$  from the  $a =^o$ .

There are a lot of other interesting things happening in this equation. Try to see if you can recreate it...

(Equation courtesy of Dr. Richard Fell.)

### **Ex09.eqn**

Another example of how to typeset equations with many parts. In this case, a one column matrix was used instead of a Multiline element. Unlike Multiline elements,

Matrices can align elements left, right, or center. In this case, the final line was typeset right-justified, and all the others left-justified.

Notice that the second choice on the right-hand side is spread over 2 lines, each with a single bracket. The way to typeset this is to have the upper line contain an empty right bracket, and the lower line contain an empty left bracket.

### **Ex10.eqn**

The equation on the cover of the manual. Another example of using techniques similar to those in Ex09.eqn to break a long expression over two lines.

### **Ex11.eqn**

An example of using fine positioning to typeset a chemical reaction expression. The reaction arrows are actually a superscript and subscript, specially kerned with the fine positioning arrows.

*Have an interesting equation that may be useful to others?*

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