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## *Mathematical Typesetting with FrameMath*

Typesetting mathematical equations is a challenge to any publishing package. Math users need a wide variety of symbols for their work, from the entire Greek alphabet to integral and summation signs, and in many different sizes. They also need dynamic typesetting: for example, if a user adds variables to a fraction, the software should reposition all of the terms in his fraction for him.

If a user needs a numeric value for his term, he should not have to go to a desk calculator to get it. For example,

### **(1-1)**

Users may need to show the same equation several different ways, and will appreciate having the software do it for them.

### **(1-2)**

The ability to automatically display the next step of a solution eliminates unnecessary repetition: once an equation is entered into a user's document, he probably will not have to manually lay out the rest of the equations leading to the solution. Some people actually enjoy the process of laying out equations.

Typesetting summations is as challenging as any calculus equation, and the tedium of typing out each individual value

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in the sum is unparalleled in electronic publishing. Fortunately, software packages can compute all the values for the author, eliminating the need to type them by hand:

### (1-3)

Matrix algebra, linear programming, and some vector algebra require transposed matrices:

This software package will not put math solution software companies out of business, but the convenience of getting a solution set up at the touch of a button is irresistible. Now, some more matrix algebra:

### (1-4)

Other demanding matrix user would enjoy seeing their software correctly position groups of matrices, and then have it perform some simple matrix algebra, so they would not have to handle doing the algebra themselves. There are only so many ways of restating a simple fact: not only can this publishing software correctly position mathematical elements on a page, it can actually solve them, which saves a tremendous amount of layout time. This software package will not put math solution software companies out of business, but the convenience of getting a solution set up at the touch of a button is irresistible.