

More Rules of Algebra NOT!

There are no rules involving the expressions:

$$\frac{1}{A+B}$$

$$e^A + e^B$$

$$\ln(A+B)$$

$$\sqrt{A+B}$$

Some explicit rules NOT! are:

$$\frac{1}{A+B} \neq \frac{1}{A} + \frac{1}{B}$$

$$e^{A+B} \neq e^A + e^B$$

$$e^{AB} \neq e^A e^B$$

$$\ln(A+B) \neq \ln A + \ln B$$

There are very few rules of algebra for fractions, exponentials, logs and powers. Anyone serious about a technical field requiring mathematics must be able to do basic mathematical manipulation using correct rules of algebra.

Checking whether a "solution" of an equation or equations actually "solves" that equation or equations.

A solution is an expression for the unknown(s) solved for in the equation(s). One substitutes these expression(s) for the unknowns in the equation(s) everywhere, and then separately simplifies the left and right hand sides until they agree. If they cannot be re-expressed to agree, it is not a solution.