Operations Research is a computationally-intensive field. Much of the OR software does a fantastic job producing results, but it does not allow for students to examine step-by-step results. These intermediate results often provide insight to the behavior of an algorithm or the meanings of the variables in the output. We will discuss how to use a computer algebra system, such as Mathematica, to enhance learning. Examples will be provided from a number of areas, including linear programming and Markov chain analysis. (Received September 19, 2005)