

1014-Z1-1559 **Pam Crawford*** (pcrawfo@ju.edu), Department of Mathematics, Jacksonville University, 2800 University Boulevard North, Jacksonville, FL 32211. *Choosing Appropriate Derivative (Integral) Techniques*. Preliminary report.

Many of the most important steps a student employs in problem solving are not solution steps, but ones that direct and guide the problem solving. Yet students often say to instructors, "I could follow you when we discussed the problem in class but I got lost as soon as I had to do it on my own." As many calculus instructors realize, it is one thing for students to learn derivative (indefinite integral) rules. It is quite another for students to know when to apply - or not apply - a specific rule. In this talk, two favorite assignments created by the presenter will be discussed. One assignment is in differential calculus and one in integral calculus. These assignments are designed to assist students with internalizing those characteristics of a function that help determine which rule(s) to employ when finding the derivative (indefinite integral) of that function. The assignments may be used with any text and are based on standard end-of-chapter exercises. Student reactions to the assignments will be discussed, also. (Received September 28, 2005)