Homework 2 - Math 142, Frank Thorne (thornef@mailbox.sc.edu)

Due Friday, September 5

Read Ch. 4-5 of Thompson. Give the names (as found in Stewart) of the differentiation rules that Thompson derives. Describe the relationship between Thompson's and Stewart's treatments.

(a) What does the rule for *integration by substitution* say? Explain why this is the Chain Rule backwards, and give a typical example of its use.

(b) What does the rule for *integration by parts* say? Explain why this is the Product Rule backwards, and give a typical example of its use.

(c) Ch. 5.5, 10-22 (even), 52-62 (even), 75, 77, 78, 79, 80.

(d) Ch. 7.1, 4-30 even (omit 16), Stewart, Ch. 2.2, 1-4, 7, 9, 13.

Additional problems:

(a) Ch. 5.5, 10-24, 52-62; Ch. 7.1, 4-34 (odd).

Bonus: Ch. 7.1, 35-38.