Homework 11 - Math 141, Frank Thorne (thornef@mailbox.sc.edu)

Due Monday, November 19

(a) Stewart, Ch. 5.4, 9-18 (omit 13), 35-38 (even).

(b) Is the integral $\int_{-1}^{4} \frac{1}{x^2} dx$ defined? Why or why not?

(c) Is the integral $\int_{-1}^{4} x^2 dx$ defined? Why or why not?

(d) Is the integral $\int_{-1}^{4} 0 dx$ defined? Why or why not?

(e) What is the substitution rule for integrals? What does it have to do with the chain rule for derivatives?

(f) Stewart, Ch. 5.5, 7-16, 53-58 (even).

Additional problems:

(a) Stewart, Ch. 5.4, 9-18 (omit 13), 35-38 (odd).

(b) Stewart, Ch. 5.5, 7-16, 53-58 (odd).

Bonus (2 points): Who invented calculus? Use any sources you want (your textbook, Wikipedia, whatever) and write a page addressing this question.