Homework 4

due on 2\textsuperscript{nd} class of week 11

(Since I post this homework 1 day behind schedule, I have reduced the number of problems :-) )

Problem 1 (4 points)
Compute the derivative of the following function (use the help of logarithm):

\[ a \quad f(x) = x^2(x-7)^3(x+5)^4 \]
\[ b \quad f(x) = \frac{(x+1)^4(x-2)}{\sqrt{x-5}} \]

Problem 2 (6 points)
Find the following indefinite integrals:

\[ a \quad \int \frac{x^2+x+1}{x} \, dx \quad b \quad \int (2x+5)^2 \, dx \quad c \quad \int 2x(x^2+2)^2 \, dx \]