Mathematics 122 A,D   Fall 2001   Quiz 6

Due October 26

Study Group Members	Name

Directions: Be sure to include in-line citations, including page numbers if appropriate, every time you use the results of discussion, a text, notes, or technology. **Only write on one side of each page.**
"Never express yourself more clearly than you are able to think." — Niels Bohr

"Iron rusts from disuse; stagnant water loses its purity and in cold weather becomes frozen; even so does inaction sap the vigor of the mind." – Leonardo da Vinci

1   Problems

Use what we have learned in Chapter 7 to evaluate any three (3) of the following indefinite integrals. Only use a table of integrals as a last resort.

1.
$$\int \frac{dx}{x\left(1+\sqrt[3]{x}\right)}$$

2.
$$\int \frac{\cos\left(x\right)}{\sin^3\left(x\right) - \sin\left(x\right)}\,dx$$

3.
$$\int \left(\arcsin\left(x\right)\right)^2\,dx$$

4. The first step in using the method of partial fractions to evaluate the integral
$$\int \frac{x^3 - 3x^2 + 2x - 1}{x^3(x-3)^2(x^2+1)^3}dx$$

   is to write out an equation containing the partial fractions (each of which has undetermined coefficients in the numerator). Write out that equation for this integral but **Do Not Solve**.