Math 10B Discussion Quiz Eight
Sections 3.2 and 3.4

Directions: Please solve these problems in a neat and legible manner on your paper. Show all of your work. In order to practice for your actual exams, do **not** use a calculator, or computer, or class notes, or any other resources.

Note: Your score on this quiz will **not** be recorded and will **not** count towards your Math 10B course grade. The purpose of this quiz is for you to to assess your understanding and uncover any of your questions and misconceptions about the course material. Thus, do not be afraid to try the problems and make mistakes. If you understand the reason for your mistakes on this friendly quiz and use those mistakes as a starting point to resolve any related questions or confusion, then the chances are that you will not make those same mistakes on the exams.

Trig Identities:

$$\cos^2(x) = 1 - \sin^2(x) \qquad \sin^2(x) = 1 - \cos^2(x) \qquad \tan^2(x) = \sec^2(x) - 1 \qquad \sec^2(x) = \tan^2(x) + 1$$

Problems:

(1) Evaluate the integral: $\displaystyle\int \sec^4(x)\,\tan^3(x)\,dx$

(2) Evaluate the integral: $\displaystyle\int \frac{2x-3}{x(x^2+1)}\,dx$