Name: _____

Math 102
Spring 2014, Term 132

Quiz 4 Section 16

Student ID: _____

Serial Number: _____

Instructions: Show Your Work!

(6pts) **1.** Let

$$f(x) = \frac{x^2 - x + 2}{x^3 - 1}.$$

(a) Find constants A, B and C such that

$$f(x) = \frac{A}{x-1} + \frac{Bx + C}{x^2 + x + 1}.$$

(b) Evaluate the integral

$$\int f(x)dx.$$

(4pts) **2.** Evaluate the integral

$$\int_0^\infty \frac{16 \tan^{-1}(x)}{1 + x^2} \quad dx.$$