Analytic Geometry and Calculus I

Quiz 5.4

Due Wednesday

Name_____

1. Compute the following definite and indefinite integrals:

(a) $\int_0^{\pi/4} \frac{\sec(x)}{\cos(x)}\ dx.$

(b) $\int_1^e \frac{2x^2-3x+2}{x}\ dx.$

(c) $\int \frac{d}{dx}[x^2+1]\ dx$

2. Find the following:

(a) $\frac{d}{dx}\left[\int_0^x te^t\ dt\right]$

(b) $\frac{d}{dx}\left[\int_0^{x^3} te^t\ dt\right]$

(c) $\frac{d}{dx}\left[\int_{\ln(x)}^{x^3} te^t\ dt\right]$