MA131 Fall 2013 **Section 06** **Quiz 11**

Name:_____ **Student Number:_____**

1. Calculate the value of the following functions.

a) $\int_0^5 (x^2 + 5x - 1)dx$

b) $\int_{-3}^2 (e^x + \frac{1}{x})dx$

c) $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} (sinx + tanx)dx$

2. Use substution rule to solve the following problems.

a) $\int sin(2x)dx$

b) $\int \frac{x}{x^2+3}dx$

c) $\int \frac{1}{\sqrt{3-2x^2}}dx$

3. Calculate the following problem.

A particle moves along a line so that its velocity at time t is $v(t) = t^2 + 2t - 3$ (measured in meters per second.) Find the following value during the time period $0 \leq t \leq 4$

(a) the displacement

(b) the total distance traveled