Serial No.:_____ Student Name:_____ Student Number: _____

Instructor: M. Z. Abu-Sbeih Math 101- Q3A Date: 2-4-2008

Problem 1: (5 points) The position of a particle is given by the function $s = f(t) = t^2 - 2t + 1$ where t is measured in seconds and s in meters. Find the total distance traveled by the particle during the first 3 seconds.

Problem 2: (5 points) Find the slope of the line tangent to the curve at $x = 0$.

$$y = \left(\frac{1+x}{1+x^2} \right)^5$$

Problem 3: (15 points) Find y':

a) $y = \sqrt[3]{x^2 + 13x - 4}$

b) $y = 2^{\cos x} + \tan^2 x^3$

c) $y = \cot \sin \cos x$

Serial No.:_____ Student Name:_____ Student Number: _____

Instructor: M. Z. Abu-Sbeih Math 101- Q3B Date: 2-4-2008

Problem 1: (5 points) The position of a particle is given by the function $s = f(t) = 2t^2 - 4t + 5$ where t is measured in seconds and s in meters. Find the total distance traveled by the particle during the first 4 seconds.

Problem 2: (5 points) Find the slope of the line tangent to the curve at $x = 0$.

$$y = \left(\frac{1+x^2}{1+x} \right)^{-5}$$

Problem 3: (15 points) Find y':

d) $y = \sqrt[3]{x^3 - 20x + 2}$

e) $y = 2^{\tan x} + \cos^2 x^3$

f) $y = \sin \cot \cos x$