MA131 Fall 2013 **Section 06** **Quiz 8**

Name:_____ **Student Number:_____**

1. Solve the following problem.

$f(x) = 4x^3 + 3x^2 - 6x + 6$

(a) Find the intervals on which f is increasing / decreasing

(b) Find the local minimum and maximum values of f.

(c) Find the inflection point, the interval on which f is concave up / down.

2. Solve the following problem.

If 1,200 cm^2 of material is available to make a box with a square base and an open top, find the largest possible volume of the box.