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

Instructor: M. Z. Abu-Sbeih   Math - 132.1   Quiz No. 3   Date: 3-11-2013.

Consider the function $f(x) = x^3 - 3x^2$.

    (a) Find the intercepts.

    (b) Find the critical numbers.

    (c) Find intervals where the function is increasing and those where the function is decreasing.

    (d) Find the relative maxima and relative minima of the function.

    (e) Find the absolute maxima and absolute minima of the function on the interval [-1,3].

    (f) Find inflection points.

    (g) Find intervals where the function is concave up and those where the function is concave down.

    (h) Sketch the graph of the function. Label all important points on the graph.