

Homework 1: Send in Weds 14 Sept, lunch time. Please do it on separated A4 sheets.

6. $f(x,y) = xy^2 + x^3y - xy$. Find all **SIX** critical points and identify if they are relative maximum, minimum, saddle point or neither.

(7 marks)

Q2 Midterm 2011

For $f(x, y) = -6x^2 + (2a + 4)xy - y^2 + 4ax$ and work to 3 decimal places,

- (a) determine the values of a , that cause any possible critical point to be a relative maximum, a relative minimum, a saddle point and neither.
- (b) if $a = -1$, find any possible critical point(s) and classify using the result from (a) if possible.