

Math 3593H**Honors Mathematics II Spring Semester 2011**

Assignment 13 - Due Thursday 4/28/2011. The third mid-term exam will be held on this date, on the topics of sections 4.9, 4.10, 5.1, 5.3, 6.1 - 6.7

Read: Hubbard and Hubbard Sections 6.8 and 6.10.

Exercises:

Section 6.8 (pages 633-635): 1, 2, 3, 5*, 6, 8, 9*, 10*.

Section 6.9 (page 642-643): 1, 2*, 3*, 4, 5, 6, 7.

Extra Question*: (a) Find a function $f(x,y)$ such that $\nabla f(x,y) = (2xy + y^3 + 1, x^2 + 3xy^2)$.

(b) Explain why you cannot find an $f(x,y)$ such that $\nabla f(x,y) = (x^2 + 3xy^2, 2xy + y^3 + 1)$.