

Due Wednesday, 31 March:

- page 350 (349): 1, 2, 5, 6ab, 7

In addition, do the following problems:

A. Find the critical points, relative extrema, and saddle points:

(a) $f(x, y) = x - x^2 - y^2$

(b) $g(x, y) = (x + 1)(y - 2)$

(c) $h(x, y) = \sin(xy)$

(d) $p(x, y) = xy(x - 1)$

(e) $q(x, y) = x^3 + x - 4xy - 2y^2$

(f) $F(x, y, z) = x^2 + 3y^2 + 2z^2 - 2xy + 2xz$

B. For (a), (b), (c), (d), and (e) above sketch some of the level sets of the functions.