Lesson 26. Local Minima and Maxima, cont.

Practice!

Use what we learned in Lesson 25 to solve the following problems.

Problem 1. Find the local minimum and maximum values and saddle points of $f(x, y) = 2xy - 4x - 2y - 2x^2 - y^2$.

Problem 2. Find the local minimum and maximum values and saddle points of $f(x, y) = 2 - x^4 + 2x^2 - y^2$.

Problem 3. Find the local minimum and maximum values and saddle points of $f(x, y) = x^3 - 3x + 3xy^2$.