### **Exercise**

**Using the OPTMODEL Procedure**

Use PROC OPTMODEL to minimize the Rosenbrock banana function.

$$f = (y-x^2)^2 + (1-x)^2$$

(This is a standard example to show that methods that use only the gradient can fail by repeatedly crossing back and forth over the "valley," whereas methods that use information about curvature can converge in a few iterations.)

Why do you think that the objective function is called a *banana function*?
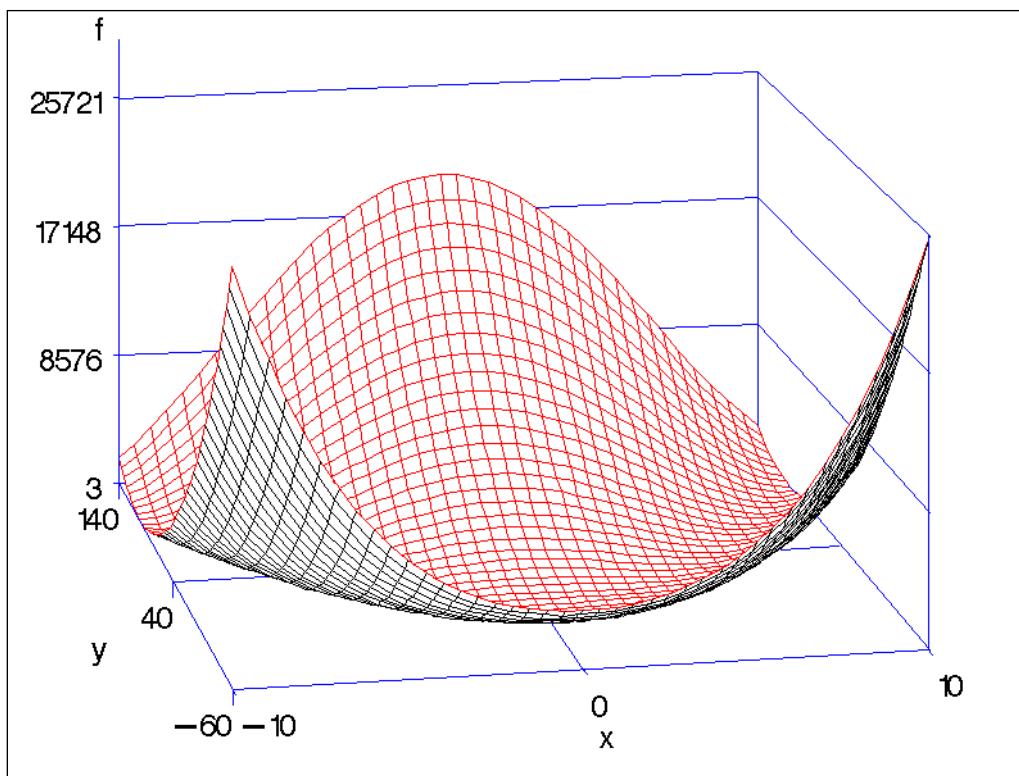


This graph can be produced by the SAS program **banana_graph.sas** located in the course files folder: **D:\workshop\OPCON**