
1. Exercise 2.6: Prove that all isolated minima are strict. (Hint: One way to do this is to prove that “not strict” ⇒ “not isolated”.)

2. (a) Give an example of a matrix that is not positive definite despite having all positive entries.
   (b) If $A$ is a positive definite matrix, must its diagonal elements all be positive? Explain.


4. Suppose that $f(x) = x^T A x$ where $A$ is an $n \times n$ matrix that is not necessarily symmetric. What is the Hessian $\nabla^2 f(x)$?

5. Exercise 2.7.


7. Exercise 2.10.

8. Exercise 2.16.