COS 511: Foundations of Machine Learning

Homework #3 – clarification

Clarification to Problem 1a

Part of this problem asks you to "derive an exact expression for the number of examples needed," in other words, an expression for the number of examples m as a function of ϵ, δ and s. Actually, depending on the method you use, this might be a bit of a pain. If you wish, you can instead just give a "big-Oh" expression for the number of examples needed. Alternatively, you can give an exact expression for ϵ as a function of m, δ and s. (This is equivalent to giving a bound on $\mathrm{err}(h)$, similar to the bounds derived on many of the other homework problems.) In this case, your expression for ϵ should go to zero polynomially fast ($O(1/m^c)$ for some constant $c > 0$).