

## COS 511: Foundations of Machine Learning

Hints for HW#5  
SVM's and On-line Learning

Due: April 6, 2006

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- 3a. Consider the cases  $y_t = 0$  and  $y_t = 1$  separately. In each case, show that at most a fraction  $4^{-\ell_t}$  of the surviving experts survive to the next round, where  $\ell_t$  is the probability that the learning algorithm makes a mistake on round  $t$ .