Machine learning fourth assignment

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1. From what we saw, the parameters that minimize the test error are 9 neighbours and L infinity. We Can learn that giving
More neighbours increases that train error, but reduces the test error. There is overfitting only if the the number of neighbours is relativly small, here 1 neighbour gave a lot of overfitting (0.0175 train error, 0.31 test error)

2. In the squares data set, the test and train error were small from the start, and only grew as we added more neigbours. In the haberman data, as we added more neighbours, the test error decreased. There is no overfitting

3. This Claim is false. In class we proved for a column vector of size 4 that $E[F(w)^2] = ||w||_2$, we can use this and take triangles in 4 dimesnions and reduce them to 1 dimension.
Every 3 points in 1 dimension will be of area 0, so for every triangle that we take that has area ¿ 0, the left inequality won't stand.