1) Use the training data below to classify the test message using a Naïve Bayes classifier with .01 as a Laplacian smoother. Show your work including the posterior probability of spam given the words and a conclusion.

Test message**: *promotion prize meeting***

Training Data:

Message1: (**spam**) promotion prize winner

Message2: (**ham**) deadline meeting promotion

Message3: (**spam**) prize lottery winner

2) Derive the MLE for p in question #3 from the first exam. Show the steps in your derivation.