

1. Sensitivity: 0; Specificity: 1
2. $6208/(6208 + 2140) = 0.744 = 75\%$
3. It is only 1% more accurate than a classifier that just predicts 0 for every email. This shows the ineffectiveness of the logistic regression classifier.
4. Sensitivity: 0.889; Specificity: 0.021; our classifier is more likely to make false negatives.
5. The word features given aren't deterministic or significant enough in distinguishing between spam and ham emails. It is possible that spam and ham emails could include those words. Therefore, purely using those words to determine spam/ham emails would not be ideal - and from our calculation of sensitivity and specificity, it is clear that our classifier is more likely to make false negatives.

