**2. Consider the logistic regression model trained on amazon\_baby.gl using GraphLab Create.**

**Using accuracy as the evaluation metric, was our logistic regression model better than the majority class classifier?**

**Yes**

No

**3. How many predicted values in the test set are false positives?**

1443

**4. Consider the scenario where each false positive costs $100 and each false negative $1.**

**Given the stipulation, what is the cost associated with the logistic regression classifier's performance on the test set?**

Between $0 and $100,000

**Between $100,000 and $200,000**

Between $200,000 and $300,000

Above $300,000

**5. Out of all reviews in the test set that are predicted to be positive, what fraction of them are false positives? (Round to the second decimal place e.g. 0.25)**

0.05

**6. Based on what we learned in lecture, if we wanted to reduce this fraction of false positives to be below 3.5%, we would:**

Discard a sufficient number of positive predictions

Discard a sufficient number of negative predictions

**Increase threshold for predicting the positive class (y\_hat = +1)**

Decrease threshold for predicting the positive class (y\_hat = +1)

**7. What fraction of the positive reviews in the test\_set were correctly predicted as positive by the classifier? Round your answer to 2 decimal places.**

0.95

**8. What is the recall value for a classifier that predicts +1 for all data points in the test\_data?**

1

**9. What happens to the number of positive predicted reviews as the threshold increased from 0.5 to 0.9?**

More reviews are predicted to be positive.

**Fewer reviews are predicted to be positive.**

**10. Consider the metrics obtained from setting the threshold to 0.5 and to 0.9.**

**Does the recall increase with a higher threshold?**

Yes

**No**

**11. Among all the threshold values tried, what is the smallest threshold value that achieves a precision of 96.5% or better? Round your answer to 3 decimal places.**

0.838

**12. Using threshold = 0.98, how many false negatives do we get on the test\_data? (Hint: You may use the graphlab.evaluation.confusion\_matrix function implemented in GraphLab Create.)**

5826

**13. Questions 13 and 14 are concerned with the reviews that contain the word baby.**

**Among all the threshold values tried, what is the smallest threshold value that achieves a precision of 96.5% or better for the reviews of data in baby\_reviews? Round your answer to 3 decimal places.**

0.864

**14. Questions 13 and 14 are concerned with the reviews that contain the word baby.**

**Is this threshold value smaller or larger than the threshold used for the entire dataset to achieve the same specified precision of 96.5%?**

**Larger**

Smaller