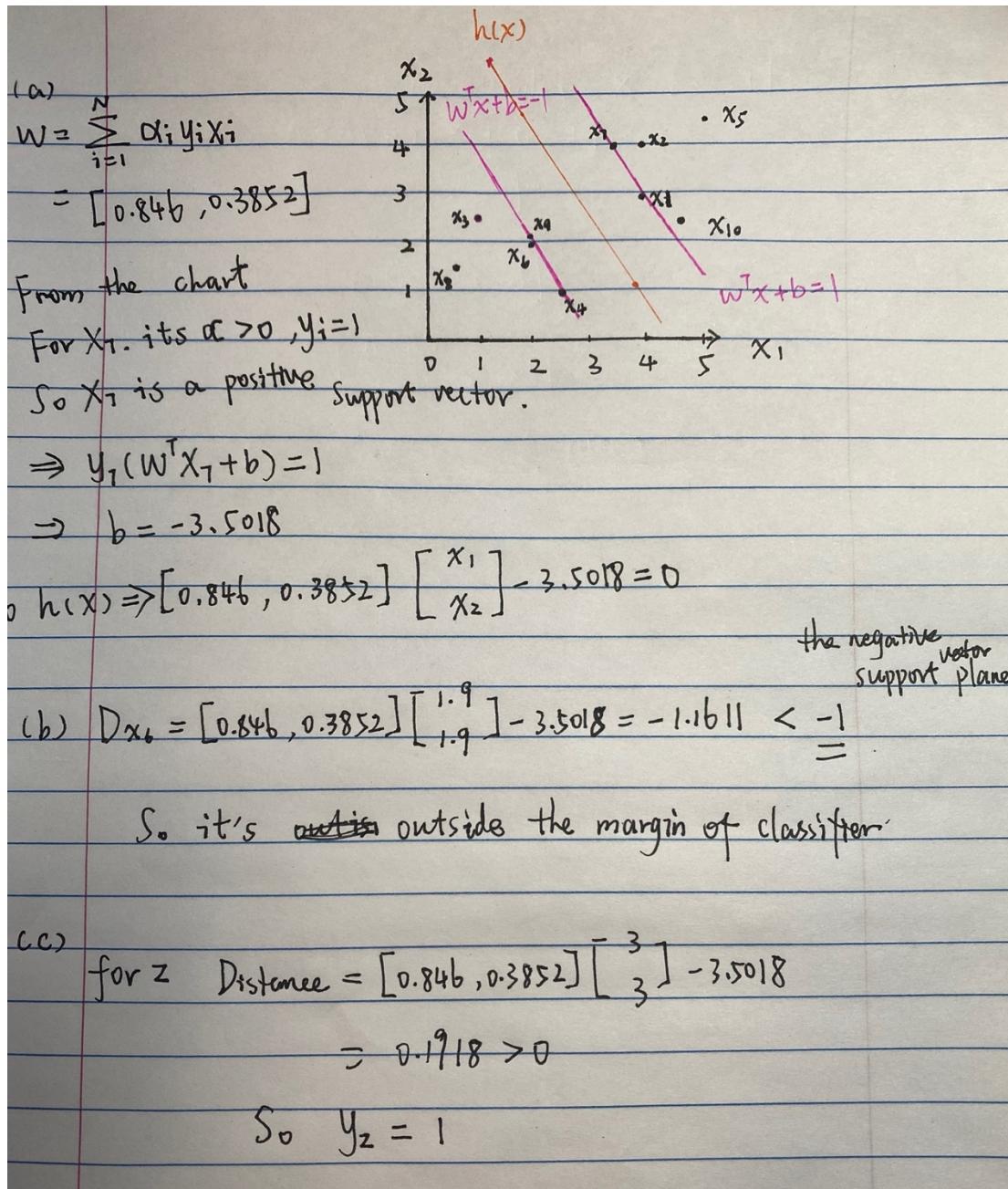


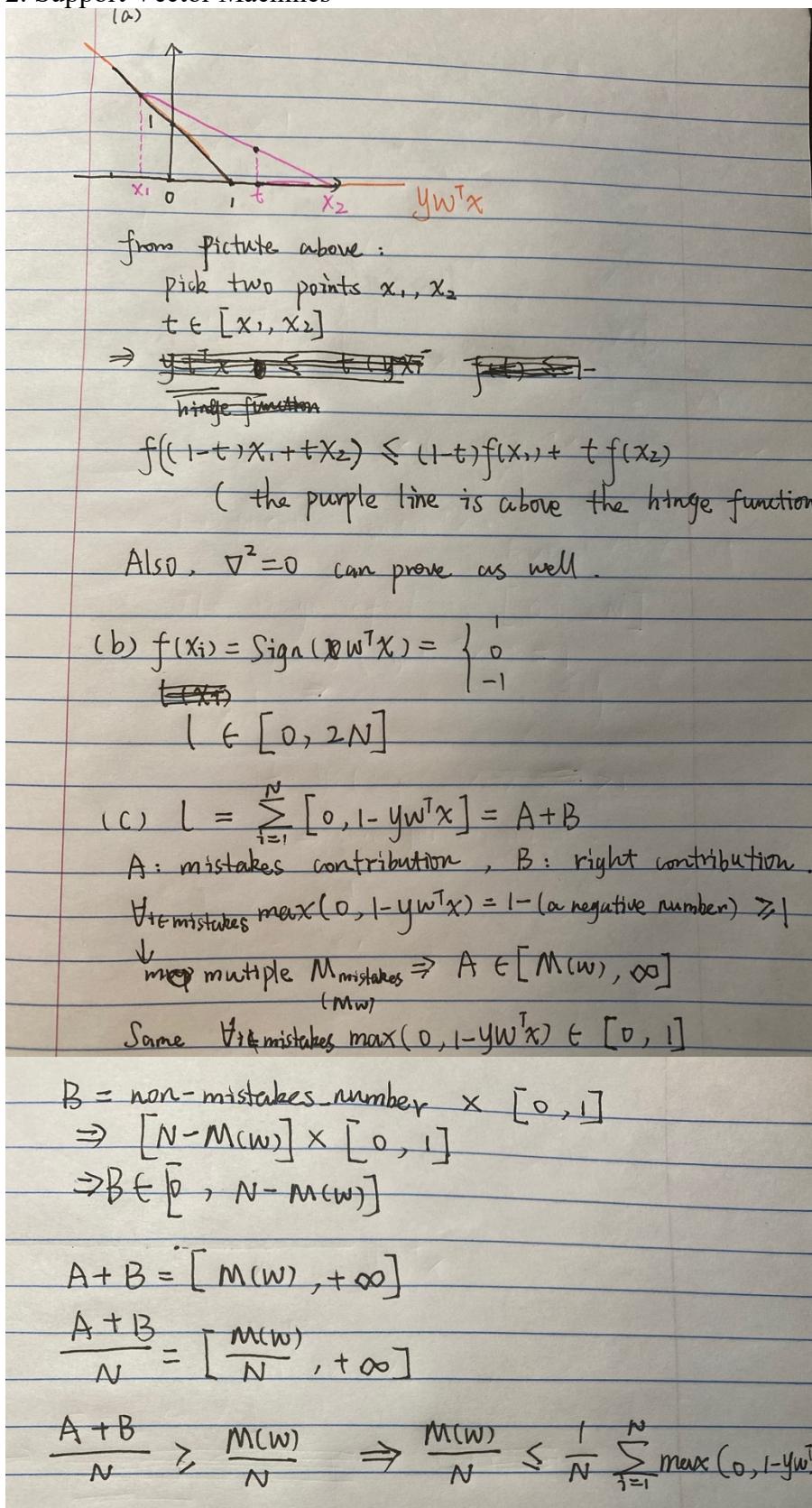
Assignment 3

1. Support Vector Machines



Assignment 3

2. Support Vector Machines



Assignment 3

3.

The best accuracy for testdata is 80.42 with max_depth = 2

Whether survive is only determined "Sex" and P_class

Females were more likely to survive than males

Passengers from higher class(1 > 2 >3) were more likely to survive

It recalls me the story of Titanic

"that a lot of gentlemen gave up their chances of getting on escape ships but gave to women"

Respect!

4.

AdaBoost is a learning sequential-process

For each round, model can learn something from the previous round, so the model is easy to be overfitting.

Round number can't be so large.

AdaBoost is a better model than decision tree with about 2-3% accuracy improvement in this dataset.

5.

This is a very easy and classical Number detection problem

However each number image is white or black (0,1)

So with some layers ,the model can get trained almost perfectly, epoch (15-20) is enough

For this question, its a 10-classes multi-classification problem so the last activation function is softmax.

There are a lot of advanced optimizers in keras which are far away better than normal GD or SGD