# Homework2

**Problem 1:**

Error rate is: 21.89 %

**Problem 2:**

At any given x we may incur one of the 3 possible costs if the prediction is incorrect:

The classifier should minimize the expected cost of prediction. In other words, the classifier should classify in such a way so that at any given x, cost is, . Since lies between 0 and 0.5, the classifier can be written as: