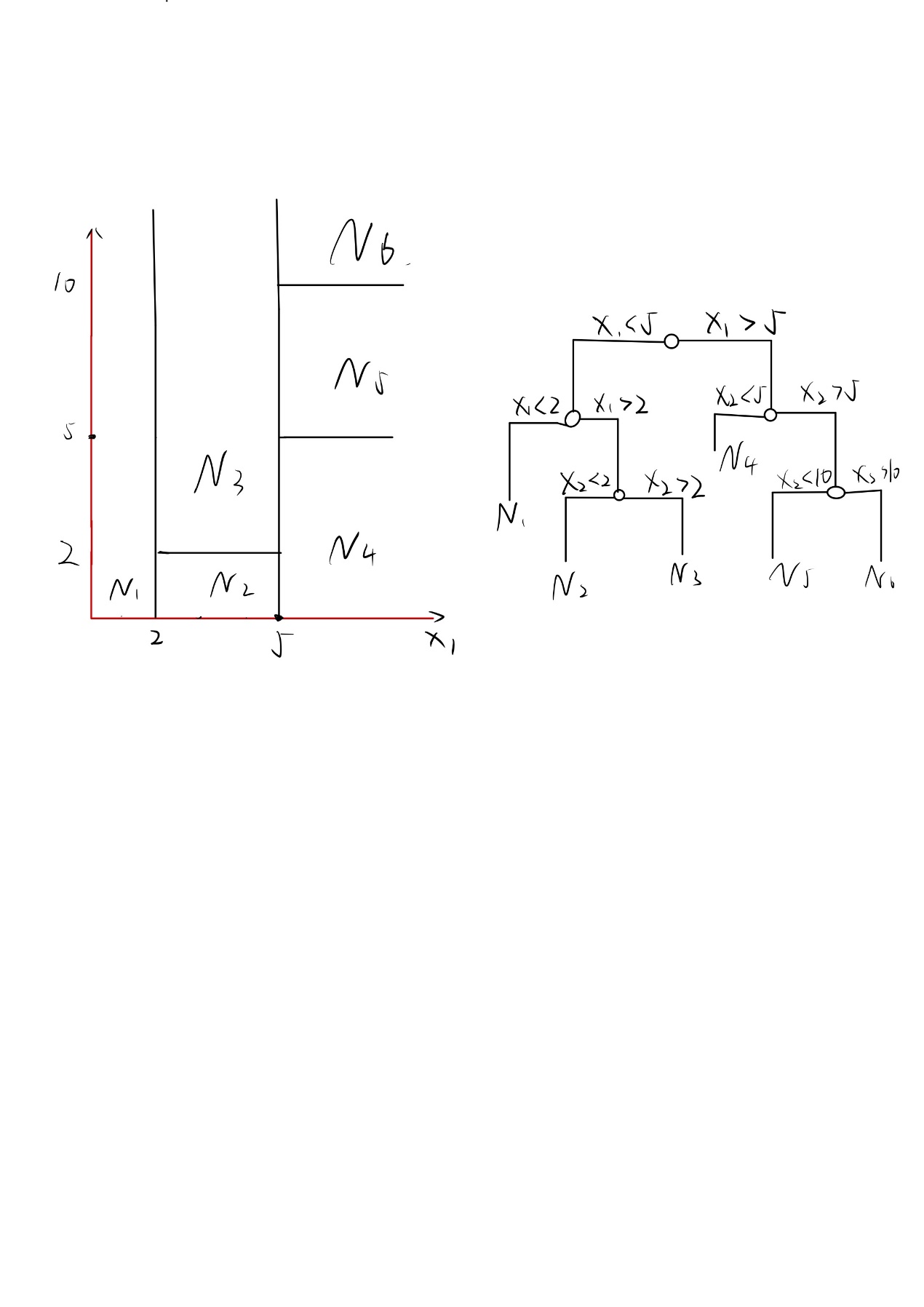
**Exercise 8.4:**

**1.**



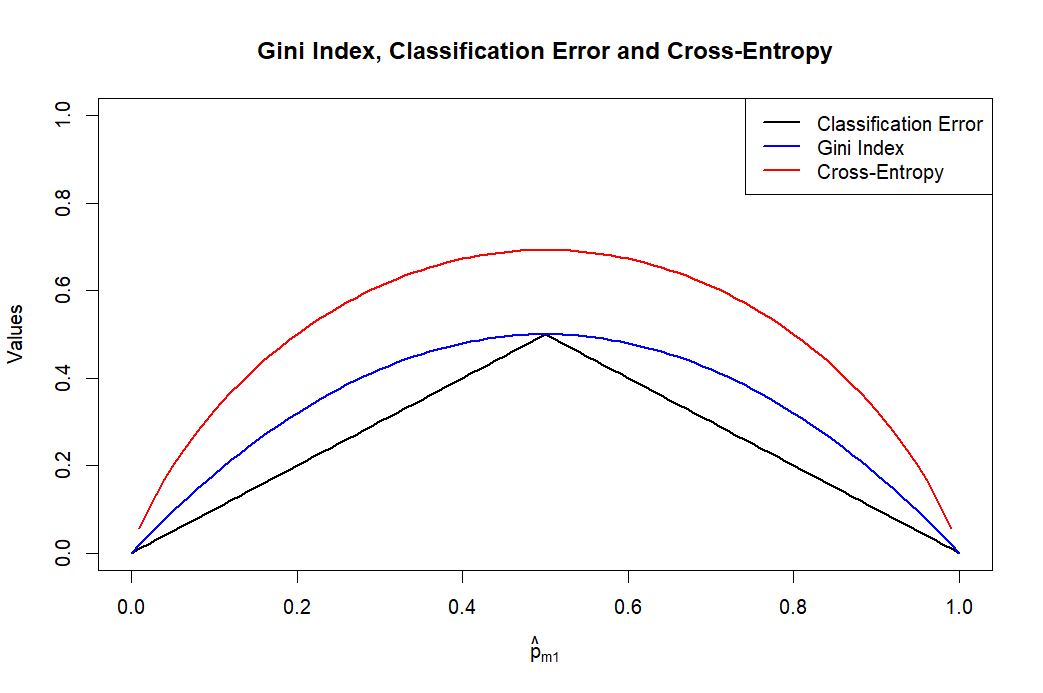
**2.**

In a setting with two classes, pmk is the proportion of observations of class k in region m. So, classification error E equals to

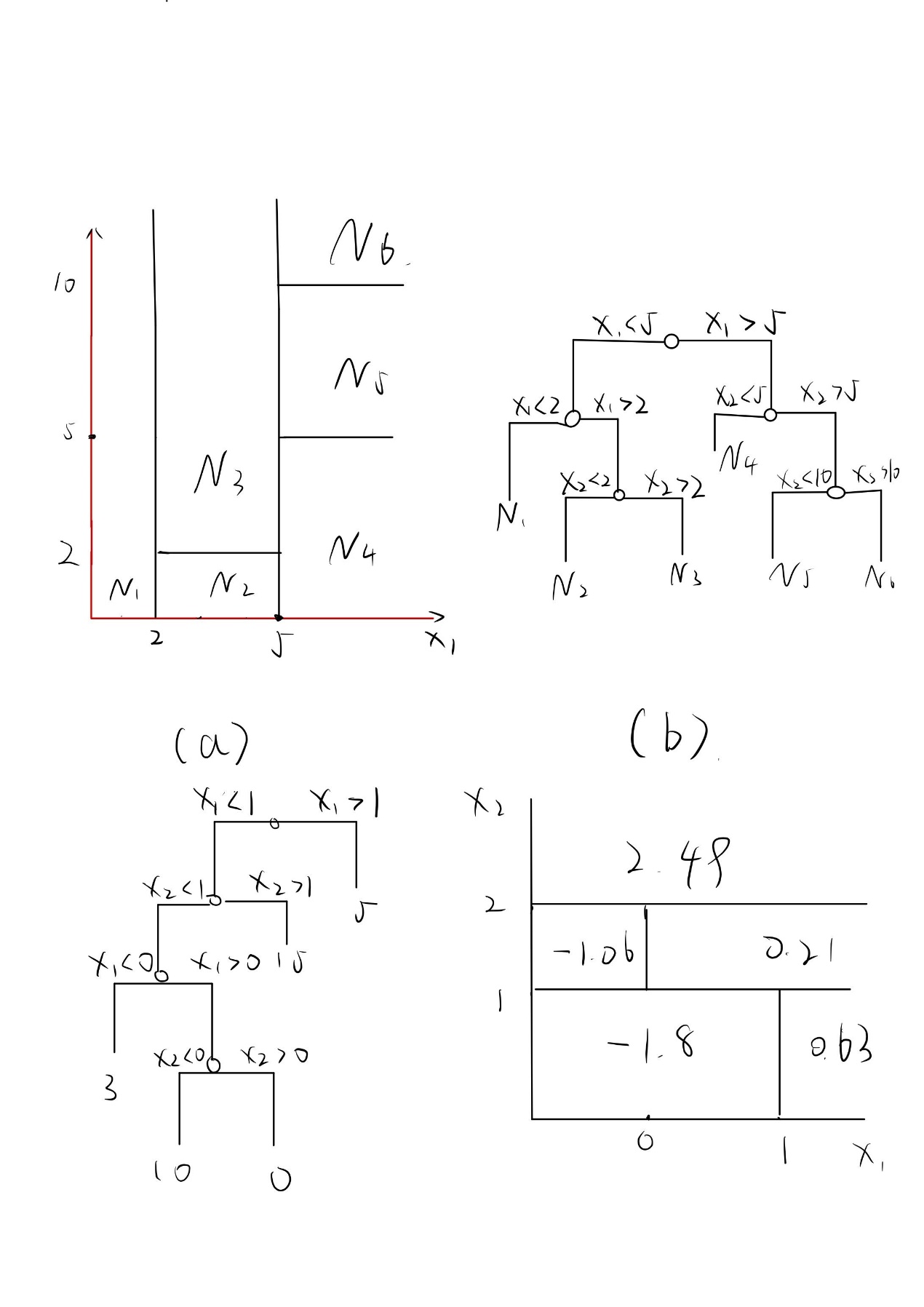
Gini index equals to

Cross entropy equals to

The plot is like



**3.**

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