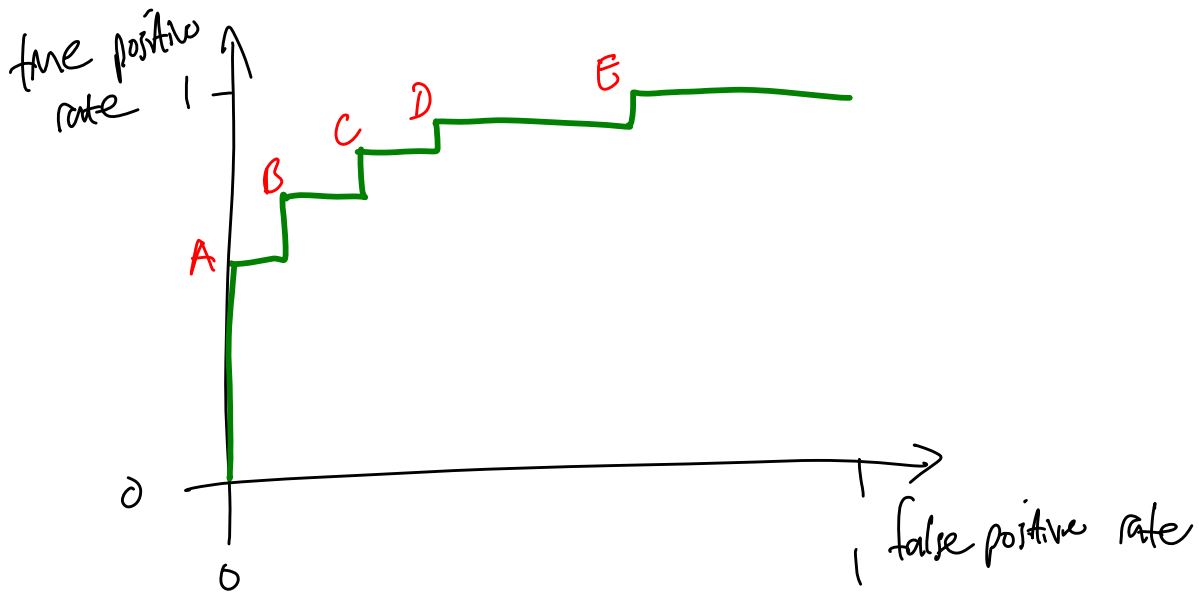


# Solution to Assignment 4, qn 3b

Note Title

10/25/2007



Total instances are 57. So

$$\text{expected cost} = \text{prob of FP} \times \text{cost of FP} + \text{prob of FN} \times \text{cost of FN}$$

$$= \frac{\text{num FP}}{57} \times 10 + \frac{\text{num FN}}{57} \times 1 \quad (\star)$$

Obtain first two columns of following table by double-clicking on the ROC curve in Weka; then compute 3rd column from  $(\star)$ :

	FP	FN	exp. cost
A	0	9	9/57
B	1	4	14/57
C	2	2	22/57
D	3	1	31/57
E	14	0	140/57

Point A has lowest expected cost. Double-clicking reveals threshold of 0.985.  
i.e. we is "good" if  $P(\text{good}) > 0.985$ , "bad otherwise"