Q1. (10 *points* in total)

	Assumption	Construction	Aggregation
Bagging	Treat training data equally	i. Sample with equal prob. ii. build a classifer for each round	majority vote
Boosting	Focus on misclassified data	Adjust sampling prob. at each round	weighted sum

Suggested Marking Scheme: The table is shown to summarize the key facts. Deduct 1 point if a key fact is missing.

Q2. (10 *points* in total)

Based on the given data, we know $TP = 48,\ FP = 12,\ FN = 5,\ TN = 15$

(a) Precision is $\frac{TP}{TP+FP} = \frac{48}{60} = 0.8$; Recall is $\frac{TP}{TP+FN} = \frac{48}{48+5} = 0.906$

(b) True Positive Rate (TPR) is $\frac{TP}{TP+FN} = \frac{48}{48+5} = 0.906$, while False Positive Rate (FPR) is $\frac{FP}{FP+TN} = \frac{12}{12+15} = 0.444$. So the coordinate of M_1 on ROC curve is $(0.444, 0.906)$

Note there is no decimal precision requirement, students may have answer like (0.4,0.9) (or (0.9,0.4)), which is also fine.

Suggested Marking Scheme: Deduct 1 point if a formula or a result is wrong.