**Exercise 8.4:**

**Problem #2.**

The boosting model is as below:

When using boosting with depth=1, the tree only has one variable as node. So the number of tree = the number of variable. So in model B = P, that means the model will add the residual of each individual model. If we use another predictors to maximize the fit to residual, we got

Thus the final model is additive.

**Problem #5.**

If we use majority voting for classification, there are 6 P(Class is Red|X) > 0.5 and 4 P(Class is Red|X) < 0.5, so the final classification is red;

If we use average probability, the P(Class is Red|X) = sum(0.1, 0.15, 0.2, 0.2, 0.55, 0.6, 0.6, 0.65, 0.7, 0.75) / 10 = 0.45 < 0.5, so the final classification is green.