Written

1.1(c) According to the definition of boosting, it serves to make majority voting for weak learners.

1.2(b), (c), (e) According to the K Means Clustering features.

2.

1. $Y_{(new)}$ = argmax $_{y \in Y}$ P(Name, Tall, Eye, Hair | Sex) * P(sex)

2. $Y_{(girl)}$ = 2/5* 2/5 * 4/5 *2/5 = 0.0512

   $Y_{(boy)}$ =1/3 *2/3 * 1/3 *1/3 = 0.0247

Predictions give a girl.

3. In the data set P (boy) = 0.375 and P(girl) = 0.625. This data set is not correctly distributed in terms of gender.