Question 1.

Is, Kobe’s shooting percentage is better at home than when he is away?

To answer this question, we first check if the two teams in variable “matchup” are separated by “vs” meaning home game or “@” meaning away game. Than we create a variable “play\_home” which equals to 1 Kobe plays at home and 0 otherwise.

After creating the “play\_home” variable, we create a logistic regression model: *shot\_made\_flag(event ='1') = play\_home* and inspect the slope and intercept*.* After fitting the model, we get the flowing equation:

**shot\_made\_flag = -0.2556 + 0.0811 \* paly\_home**

From the equation we see that if Kobe plays at home will have around 8.1% greater chance of him making the shot.

1. PROC IMPORT DATAFILE='/home/iangelov0/project3/data.csv' replace
2. DBMS=CSV
3. OUT=data;
4. GETNAMES=YES;
6. data data;
7. set data;
8. if substr(matchup, 5, 1) = '@' then play\_home = 0;
9. else play\_home = 1;
11. proc logistic datadata=data;
12. model shot\_made\_flag(event ='1') = play\_home;
13. run;