Name\* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**BA 355: Business Analytics, Case 1, Part 3**

At this point, let’s combine everything we’ve covered in the first three weeks of class into one assignment.

Using all 1309 data points, develop both linear regression [forcing the y-intercept to be 0.5] and logistic regression [y = 1/(1+e-β1x) {with β0 forced to 0} minimizing the sum of the errors squared] models for the National Basketball Association (NBA). Use the historic NBA data from the 2016-17 season on Goldsheet.com. I don’t know why the data from 2017-18 or 2018-19 are not available; extra credit if you can find this data.

For each regression model, **print** the graph of how the line/curve fits the data and **interpret** the functions as best you can. Finally, use each model to predict the probability that 5, 10, 15, 20 and 25 point favorites actually win the game. Which predictions seem best to you?

\* **This is an individual assignment** (to check that all students understand everything we’ve done so far). You may work *next* to another student, but not *with* another student. You may (and are even encouraged to) talk about the assignment with each other, but the spreadsheet and the results you turn in must all be your own work, done individually.

