Name:_____

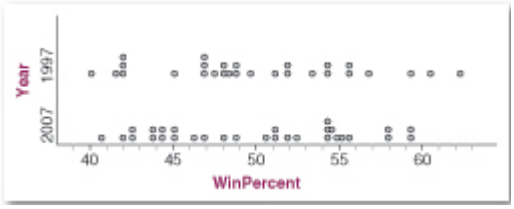
Date:_____Period:_____

Chapter 7 Partner Review: Has Revenue Sharing Helped Competitive Balance in Baseball?

Unlike football and basketball, MLB does not impose a limit on the amount of money a team can pay its players. This decision has led some people, especially fans of teams in smaller markets, to believe their teams cannot be as competitive because of the extravagant spending of teams in larger markets, such as Boston, LA, Chicago, and especially NY. To address this concern, in 1997 MLB decided to impose a tax on teams with payrolls above a certain level and created a system of revenue sharing whereby all teams were given a share of revenue generated by the league through TV contracts, product sales, etc. Has this "sharing of the wealth" made a difference? If revenue sharing has been effective, the pool of talented players should be more evenly distributed among the teams. This should make the variability in winning percentage among the teams smaller than in years before revenue sharing began. To compare the variability in winning percentage, we will use the SD of winning percentage for the 28 teams in 1997 and the SD of winning percentage for the 30 teams in 2007.

1.) If we want to test if revenue sharing has increased competitive balance in baseball, which hypotheses should we test?

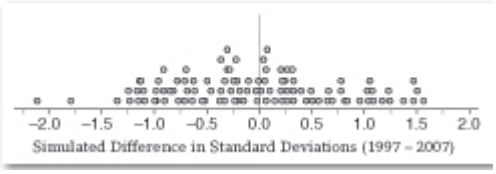
2.) If there was perfect competitive balance, each team would win exactly half of its games. What would be the SD of the distribution of winning percentages if each team won 50% of its games?



3.) Calculate the observed SD for both distributions and briefly compare them. Then, compute the difference in observed SD (1997-2007) and use this as the test statistic.

4.) Explain how to simulate the distribution of the test statistic, assuming that the true SDs were the same in both years.

5.) Conduct 100 trials of your simulated difference in SDs on a dotplot. Briefly explain what information the dotplot provides.



6.) Based on the results of the simulation, estimate and interpret the p-value.

7.) Based on your p-value, state an appropriate conclusion.

8.) If your conclusion was an error, which type of error did you make? Explain.