

Practice exploring data by looking at the Powerball numbers up until the end of 2017. There are many things that can be explored about the Powerball numbers that have been drawn. The rules of the Powerball game have changed, and thus any of the statistics and graphs should reflect these changes. An explanation of these changes should be included in the report. Visualization of the data is preferred and should be clear with titles, legends, etc. Many times the way the data are given to us need to be cleaned up and modified before it is in a usable format. Anything that needs to be done to accomplish this should be documented and explained in the report.

Use the PowerballNumbers.txt data file to load the Powerball numbers drawn with their dates. Then explore away! A common numerical summary of the columns (numbers drawn). Frequency, histograms, min, max, average, median, mode, etc. These may be done based on the white ball order and overall. What are the differences or gaps between the numbers in any drawing (average, min, max)? Is there anything interesting when you look at the sums of the numbers drawn? Were any winning drawings repeated? What about the white ball only combo? If so, how many? Were any drawings in which the Powerball was the same number as one of the white balls? If so, how many times? Is there any number not been ra

Can you generate your own random Powerball tickets? How many times does it take to generate a drawing that has already been a winner? How about you pick a specific drawing date (like near your birthday...) and see how long it may take to generate that winning drawing?

Use the PBJackpots.xlsx file to load the dates of winning jackpots and their amounts (again, up until the end of 2017). Matching the dates with the other data, is there anything different about the numbers that end up being jackpots and the numbers that aren't? What about the summaries about the size of the jackpots? The last rule change was supposed to achieve higher jackpots. Does this appear to be true? If you graph the size of the jackpots over time, is there a trend on spikes, etc.?