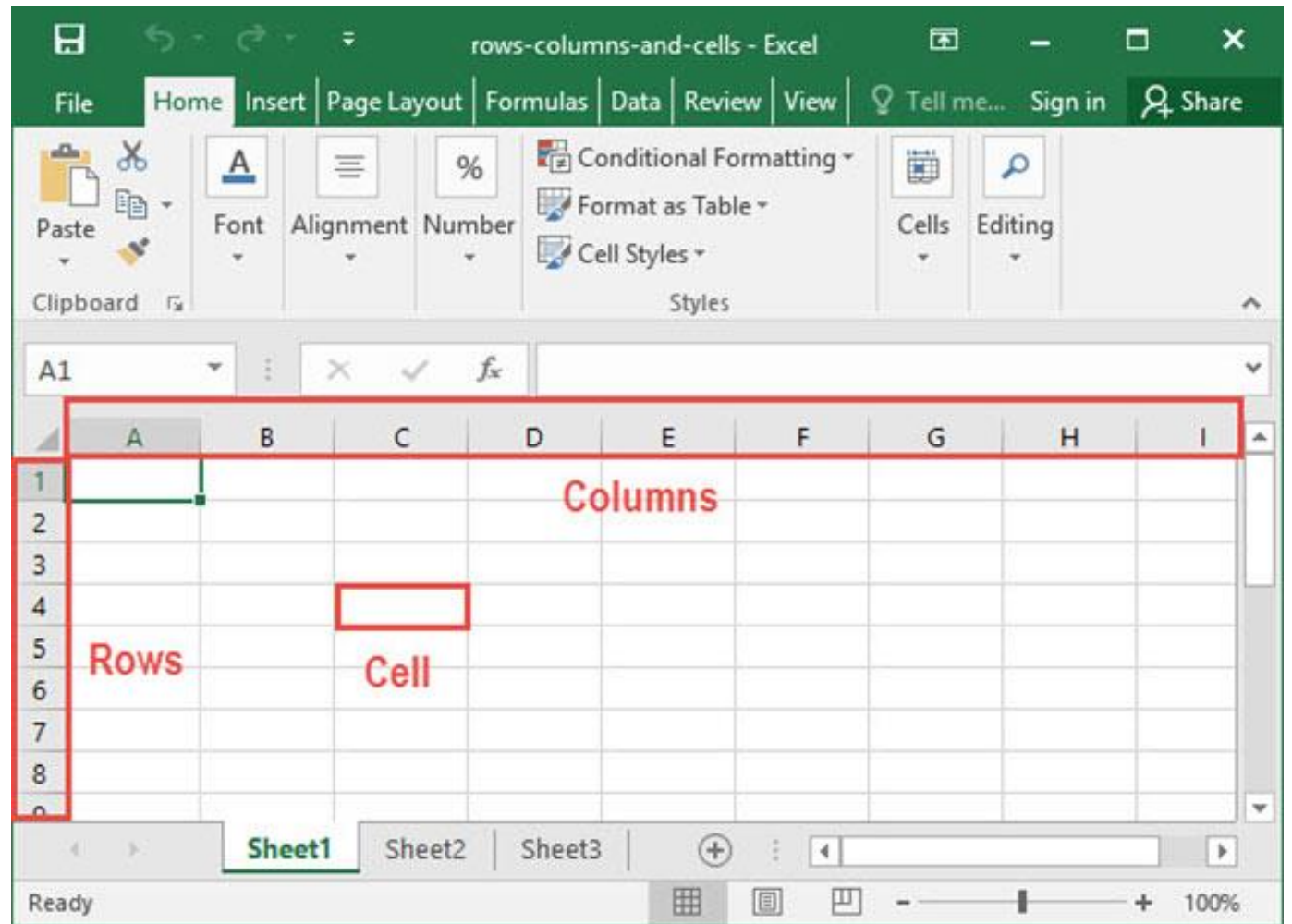# Sports Econometrics

Reading a Data Set

Columns and Rows

Observations and Variables

- **Data set**
- The information given in a table or multiple tables (MS Access). Often derived from multiple sources
- **Observation**
- The value assigned to **only one** element is called an observation. In economics, rows are often individual observations
- **Variable**
- Anything that can take on **different** values is called a variable. In economics, columns are often an individual variable.
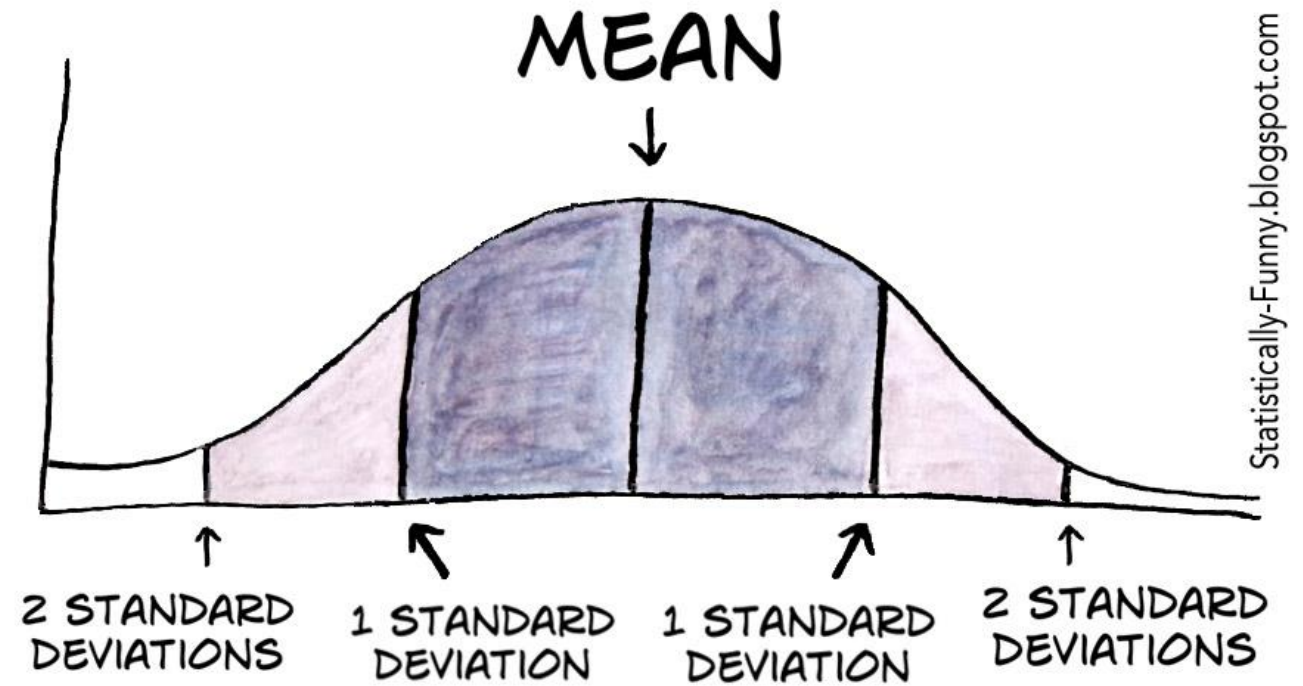
Sample Data Set

- wittem.people.cofc.edu

Descriptive Statistics

- A summary of the important aspects of the data set

- Usually includes the following:
  - Mean (average)
  - Median (the mid-point)
  - Maximum
  - Minimum
  - Standard Deviation

Standard Deviation is legit!

- Standard Deviation (SD) is square root of the Variance
- SD is expressed in same units as variable

Calculating Variance

- NFL QB Rookie Class of 2010 – Preseason yards
  - Blaine Gabbert 192, Tyrod Taylor 186, Cam Newton 173, Andy Dalton 144
- Calculate Variance and then Standard Deviation

Sample Variance

$$s^2 = \frac{\sum(x - \bar{x})^2}{n - 1}$$

Sample Standard Deviation

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}$$

What does Excel say?