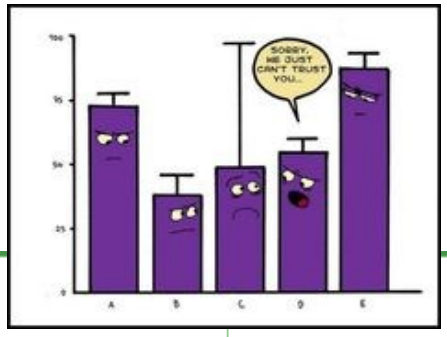
AP Statistics

Unit 1: Descriptive Statistics

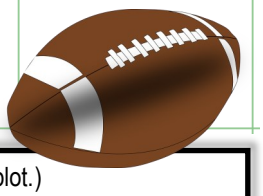
Chapters 1-5



		14	15	Intro Day 1 Smelling Parkinsons
Intro Day 2 Smelling Parkinsons **HW: reading guide**				
Contingency Tables http://bit.ly/22JAX3n	20 3.1 Rent-a-Date Categorical Data **HW: p38(11-13)**	21 3.2 Contingency Tables Independence **HW: p41(28,29)**	22	23
24 4.4 Quantitative Graphs by hand **HW: p76 (34, 40, + box plot)**				
Box plots & outliers http://bit.ly/1PAzDgX	27 4.5 Quantitative Graphs with technology **HW: p72(5-8)**	28 5.1 Comparing Distributions **HW: p97 (13-16)**	29	30
31 5.3 Unit Test				

4.2/4.3
Summary Statistics – Center & Spread
Samatha's Family
HW: p75 (32-34)

5.2
Review/Practice
Gather HW – due Friday!



A. Interpreting graphical displays of distributions of univariate data (dotplot, stemplot, histogram, cumulative frequency plot.)
   1. Center and spread
   2. Clusters and gaps
   3. Outliers and other unusual features
   4. Shape

B. Summarizing distributions of univariate data
   1. Measuring center: median, mean
   2. Measuring spread: range, interquartile range, standard deviation
   3. Measuring position: quartiles, percentiles
   4. Using boxplots
   5. The effect of changing units on summary measures

C. Comparing distributions of univariate data (dotplots, back-to-back stemplots, parallel boxplots
   1. Comparing center and spread: within group, between group variation
   2. Comparing clusters and gaps
   3. Comparing outliers and other unusual features
   4. Comparing shapes

E. Exploring categorical data: frequency tables
   1. Frequency tables and bar charts
   2. Marginal and joint frequencies for two-way tables
   3. Conditional relative frequencies and association
   4. Comparing distributions using bar charts

MC Practice
http://bit.ly/1TRRhsY

More MC Practice
http://bit.ly/231Vkat

Formulas

(I) Descriptive Statistics

$$\bar{x} = \frac{\sum x_i}{n}$$

$$s_x = \sqrt{\frac{1}{n-1}\sum\left(x_i - \bar{x}\right)^2}$$

$$s_p = \sqrt{\frac{\left(n_1 - 1\right)s_1^2 + \left(n_2 - 1\right)s_2^2}{\left(n_1 - 1\right) + \left(n_2 - 1\right)}}$$

$$\hat{y} = b_0 + b_1 x$$

$$b_1 = \frac{\sum\left(x_i - \bar{x}\right)\left(y_i - \bar{y}\right)}{\sum\left(x_i - \bar{x}\right)^2}$$

$$b_0 = \bar{y} - b_1\bar{x}$$

$$r = \frac{1}{n-1}\sum\left(\frac{x_i - \bar{x}}{s_x}\right)\left(\frac{y_i - \bar{y}}{s_y}\right)$$

$$b_1 = r\frac{s_y}{s_x}$$

$$s_{b_1} = \frac{\sqrt{\frac{\sum\left(y_i - \hat{y}_i\right)^2}{n-2}}}{\sqrt{\sum\left(x_i - \bar{x}\right)^2}}$$