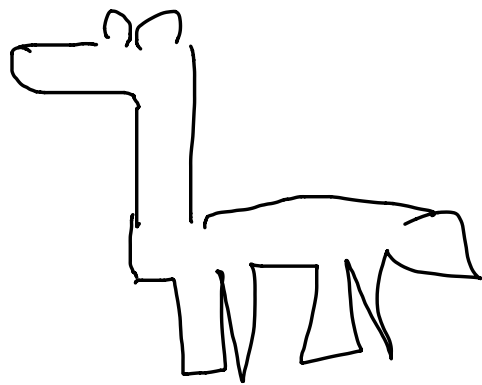


Agenda on the chalkboard

We need to check the AP registration list. It's not too late to sign up!!!



$$P(A|B) = .60$$

$$P(B) = .85$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$ME = \sqrt{\frac{p(1-p)}{n}} z^*$$

$$.02 = \sqrt{\frac{.25}{n}} 1.64$$

$$\left(\frac{.02}{1.64}\right)^2 = \frac{.25}{n}$$

$$n = .25 / \left(\frac{.02}{1.64}\right)^2$$

$$\approx 1702$$

# St John's Wort:

$$\text{Full: } \frac{27}{113} \\ 0.2389$$

$$\text{Partial: } \frac{16}{113} \\ 0.1415$$

$$\text{No: } \frac{70}{113} \\ 0.6194$$

# Zolof

$$\text{Full: } \frac{27}{109} \\ .2477$$

$$\text{Partial } \frac{26}{109} \\ .2385$$

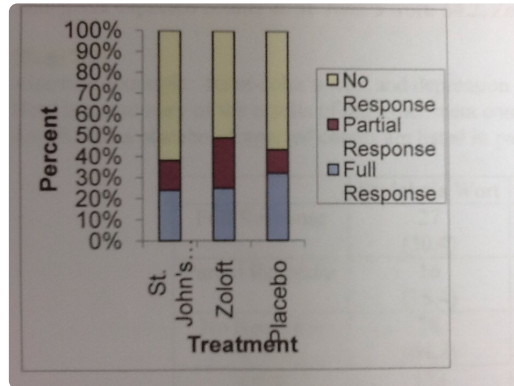
$$\text{No: } \frac{56}{109} \\ .5137$$

# Placebo:

$$\text{Full } \frac{37}{116} \\ .3189$$

$$\text{Partial } \frac{13}{116} \\ .1120$$

$$\text{No: } \frac{66}{116} \\ .5689$$



**Saint-John's-wort and depression**  
 An article in the *Journal of the American Medical Association* (April 10, 2002, vol 287, no 14) reports the results of a study designed to see if the herb, Saint-John's-wort, is effective in treating moderately severe cases of depression. The study involved 338 subjects who were being treated for major depression. The subjects were randomly assigned to receive one of three treatments: St. John's wort (an herb), Zoloft (a prescription drug) or placebo for an 8-week period. The table below summarizes the results of the experiment.

	St. John's Wort	Zoloft	Placebo	Total
Full Response	27	26	37	91
Partial Response	16	26	13	55
No Response	70	56	66	192
Total	113	109	116	338

**Problem**  
 (a) Calculate the conditional distribution (in proportions) of the type of response for each treatment.  
 (b) Make an appropriate graph for comparing the conditional distributions in part (a).  
 (c) Compare the distributions of response for each treatment.

$\frac{91}{338} \cdot 113 \rightarrow$  Expected Count "Full Response SJW"

$\frac{91}{338} \cdot 109 \rightarrow Z, FR$

$$\frac{91}{338} \cdot 116 \rightarrow \text{FR, P}$$

$$\frac{55}{338} \cdot 113 \rightarrow \text{SW, PR}$$

$$\frac{192}{338}$$

$\chi^2$ -square:

$$\frac{(27-30.4)^2}{30.4} + \frac{(27-29.3)^2}{29.3} + \dots +$$

$$\frac{(66-65.9)^2}{65.9} = 8.72$$