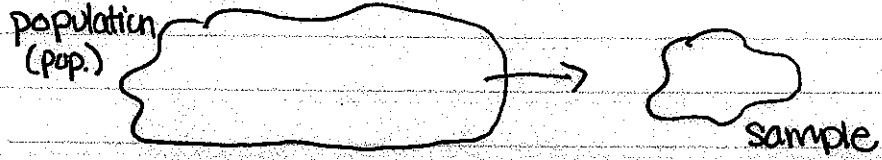
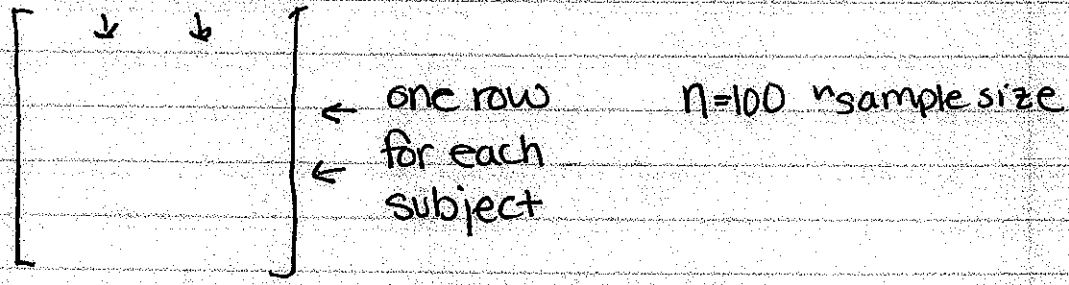


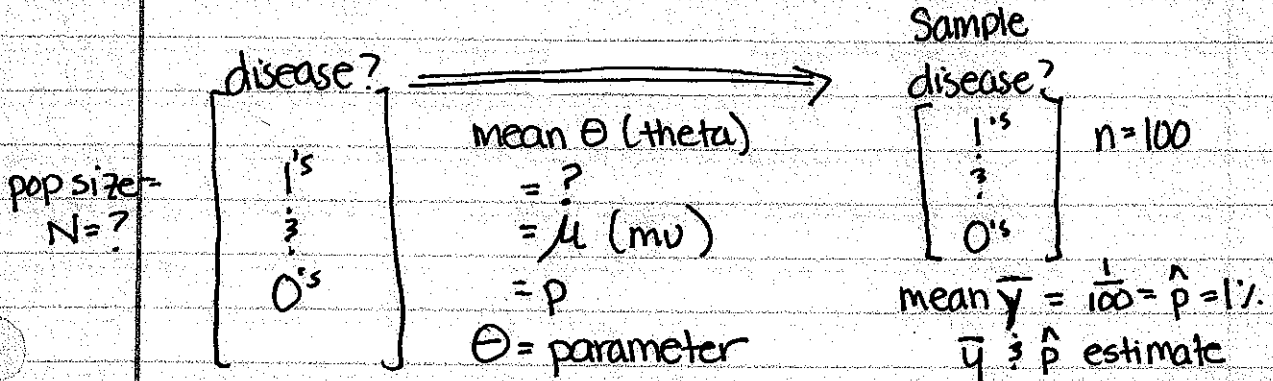
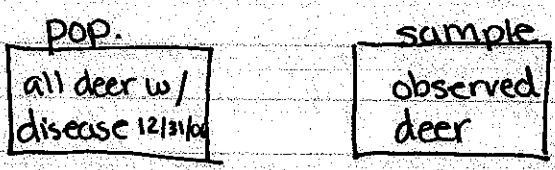
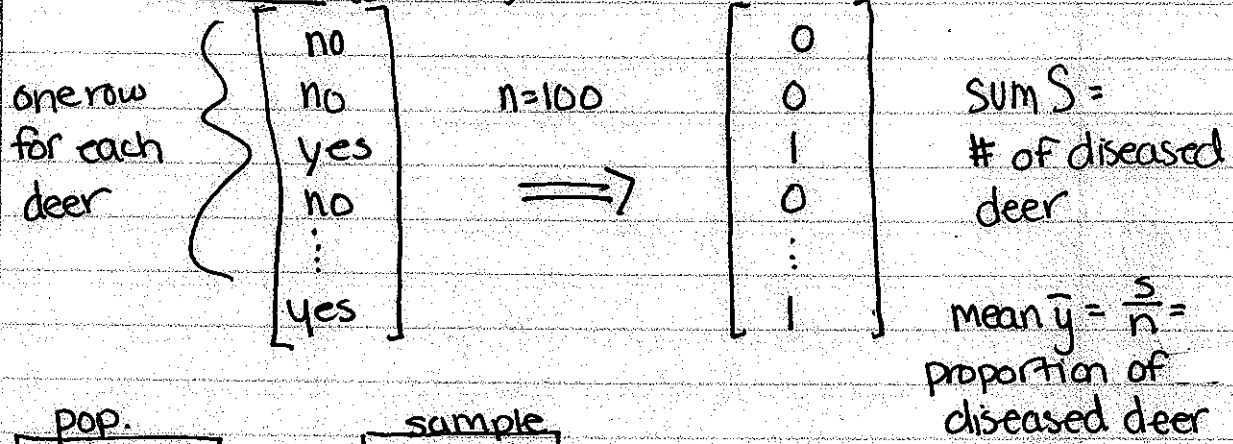
pg 1 Lecture #2 : Descriptive Methods



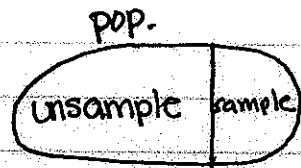
one column for each variable



disease (column)

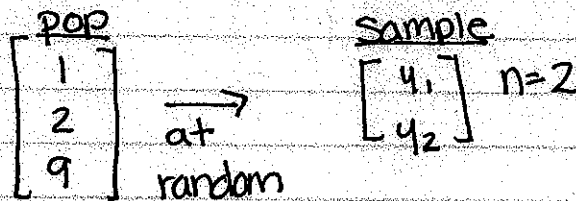


(May be pop. around 100-1000)



goal: Make the sample  
 $\hat{=}$  unsample as similar as possible in all relative:  
 this is a representative sample

Simple method to achieve the goal: choose the sample elements at random from the population



**SRS**  $\rightarrow$  at random without replacement

$\hookrightarrow$  Simple Random Sampling

**IID**  $\rightarrow$  at random with replacement

$\hookrightarrow$  Independent Identically Distributed

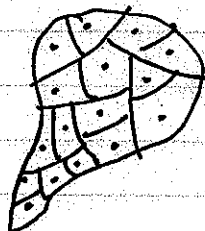
SRS is more informative than IID (so this is what people do), but math is easier with IID; when little  $n$  is a lot smaller than  $N$ :

$(n \ll N)$   $SRS \hat{=} IID$   $\hat{=}$  means: about the same as

So people do SRS but when the  $n \ll N$  they use math from IID.

$\Theta$  parameter (unknown) pop.

$\hat{\Theta}$  ("theta-hat")  $\rightarrow$  estimate of  $\Theta$  from sample data



Caitlin Doughty

pg3

Lecture #2

AMS7

1/8/09

Variable	Values	
eye color in animal of study	blue, brown	qualitative (categorical) Nominal, dichotomous
success in maze running	very slow    fast slow        very fast moderate	qualitative $\approx$ ordinal
size of plant ① # of leaves ② height	① 44, 45... ② 111.47cm...	quantitative, discrete ratio, quant., continuous
Growing temp. at which most buds were produced	25.240°C	quant., continuous, interval

