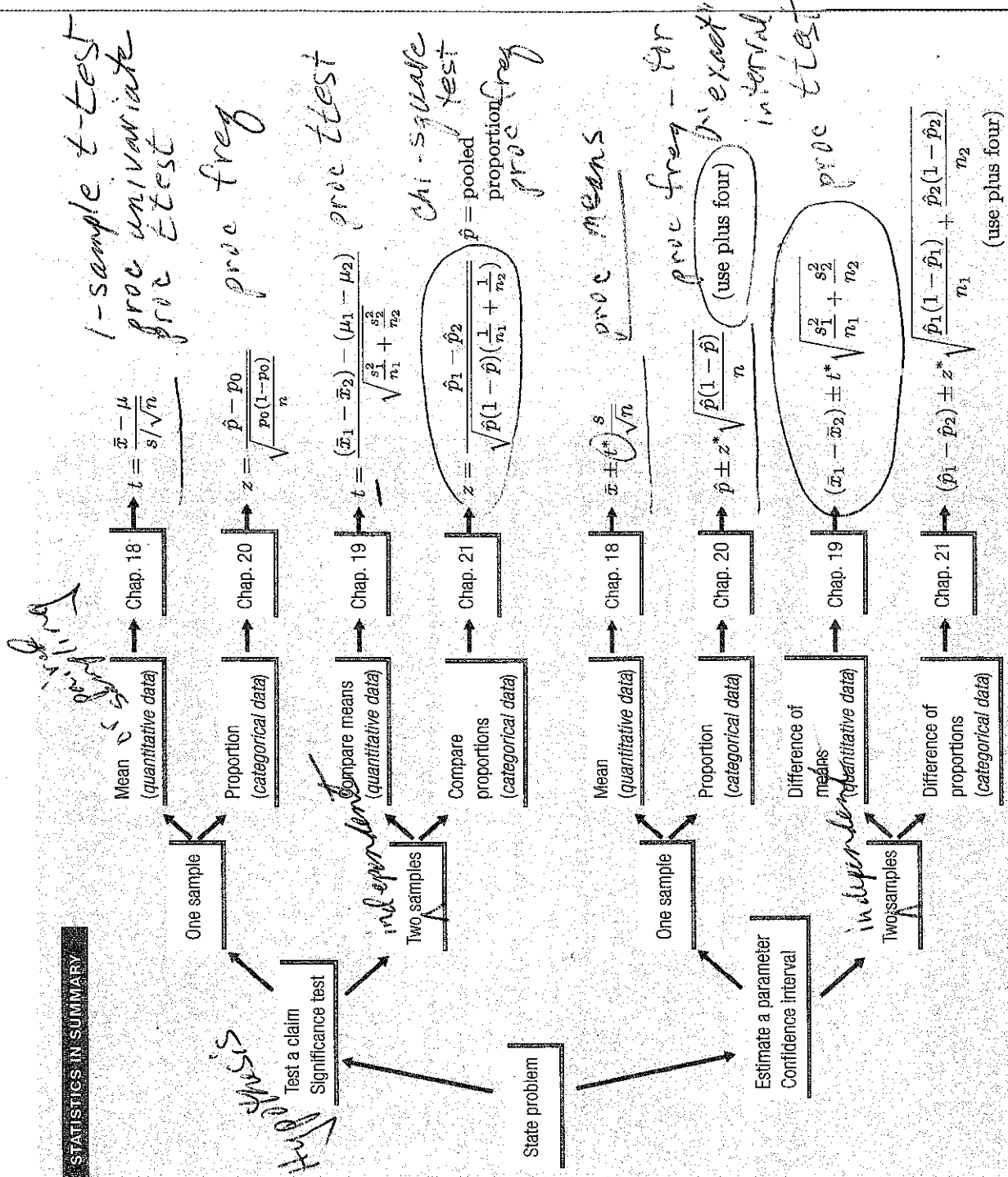




which of several inference procedures to use. Learning to recognize problem settings in order to choose the right type of inference is a key step in advancing your mastery of statistics. This is the "Plan" step in the four-step process, in which you translate the real-world problem from the "State" step into a specific inference procedure.

**STATISTICS IN SUMMARY**



plot.  
r, spread. Outliers?  
urves) to describe overall pattern.  
iber summary or  $\bar{x}$  and s.  
tive variables:

on, strength. Outliers? Influential  
relationships: correlation, regression  
lation does not imply causation.  
influential observations.

ons about a wider population.  
g as if your data come from random  
xperiments. Beware: if they don't,  
ut."  
g inference. Inference often requires a  
al with no strong outliers.  
did this many times?"  
ulation parameter.  
that captures the true parameter 95%

nfidence interval does not include  
h as undercoverage and nonresponse.  
inst  $H_0$  in favor of  $H_a$ .  
would I get an outcome favoring the  
at  $P =$  stronger evidence against  $H_0$ .  
vel,  $P < 0.05$ , means that an outcome  
ian 5% of the time if  $H_0$  were true.

at the same as practical significance.  
ffects significant. Small samples can  
icant.  
a effect (for example, with a confi-  
ificance.

SAS?

diff = other - before;

$X_{n2}$

$X_{n1}$

|

$X_2$   
after  
 $X_{21}$   
 $X_{22}$

$X_1$   
before  
 $X_{11}$   
 $X_{12}$

①