

Miscellaneous topics and random sampling review

Know how to construct and interpret a boxplot.

Remember that the only boxplot we use is what the book calls a “modified” boxplot.

Know the definitions of:

Q_1

Q_3

IQR

Upper fence

Lower fence

Be able to recognize outliers.

Know how to construct and interpret a parallel boxplot.

What is the difference between a *sample* and a *population*?

When is sampling better than trying to measure everything?

(Measuring everything is also termed a *census*)

Why can sampling be better?

Why is it so important to define a population precisely?

Why do we sometimes have to be careful with studies done in zoos or labs?

Please remember that much valuable research is done in zoos and labs, but you should be aware of the occasional limitations of some of this research.

Know the difference between estimates and parameters

What are the symbols we use for estimates? Parameters?

Make sure you recognize all the ones we discussed in class.

What does the $\hat{}$ (hat) symbol mean?

What is random sampling?

How would you do random sampling?

Be able to use a random number table.

You should be aware that this is usually done with a computer.

(Are the random numbers generated by a computer truly random? Why, or why not?)

What is the effect of sample size?

What is systematic sampling? Opportunistic sampling?