

Statistics Final Topics

1. population vs. sample
2. parameter vs. statistic
3. Mean vs. weighted mean
4. shape of a histogram/boxplot
 - *location of mean vs median
5. 5 # summary
 - *1-varstat
 - *boundaries for outliers
6. Outliers
 - * what do they affect (mean, sd, r, LSR line, range) anything with a calculation
 - *what they don't affect (5 # summary, IQR, median) anything without a calculation
7. standard deviation
 - *1-varstat
8. Frequency Distribution
 - *median
9. Density curves
 - *must be on or above x-axis, total area under the curve = 1
 - *normal distribution 68-95-99.7 rule
 - * normal table
10. Least squares regression line
 - *linreg L1, L2
 - *r
 - * slope
 - *influential
 - * residual and residual plot
 - *predicting a response
 - *explanatory vs. response
11. Probability Distribution
 - *discrete
 - *mean and standard deviation
 - *1-varstat L1,L2

12. Sampling methods

*SRS, stratified

*bias (voluntary response, convenience, non-response, undercoverage)

*lurking variables

13. Experiments

*randomized comparative experiment.

*double blind

*control group

14. Simulation

*selecting random digits from a table

15. Sampling distribution of the sample proportion

* mean and standard deviation $\mu_{\hat{p}} = p$ $\sigma_{\hat{p}} = \sqrt{\frac{p(1-p)}{n}}$

* Conditions

* Use normal table to answer problems

16. Sampling distribution of the sample mean

*mean and standard deviation $\mu_{\bar{x}} = \mu$ $\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$

* Central Limit Theorem

* Use normal table to answer problems

17. Binomial Probability

*binomialpdf (# of trials, prob. of success, #of successes) (ti-84)
single probability

*binomialcdf (#of trials, prob. of success, # of most successes) (TI - 84)
adds up 0 to # of most successes

*For the TI-Nspire you can just use Binomialcdf for both a single or multiple probabilities.

For a single probability your lower bound and upper bound are the same.

You find it under menu, statistics, distributions

18. Probability – only Binomial or a probability distribution