

Here is a list of topics which we covered and will be on Exam 01.

1. goal of statistics

- difference between population and sample side of statistics
- why they are separate
- how they relate
- why statisticians relate them

2. probability

- definition: intuition and operationalized
- given a sample from a theoretical population (random variable), how to estimate probabilities

3. parameters

- definition: strict and operationalized
- given a sample from a theoretical population (random variable), how to estimate population parameters – likelihood

4. likelihood

- what, why, and how
- understanding well enough to apply this method for an arbitrary likelihood function
- how the likelihood connects to parameters

5. expected value and standard deviation

- definitions
- connection to likelihood
- calculations in R