

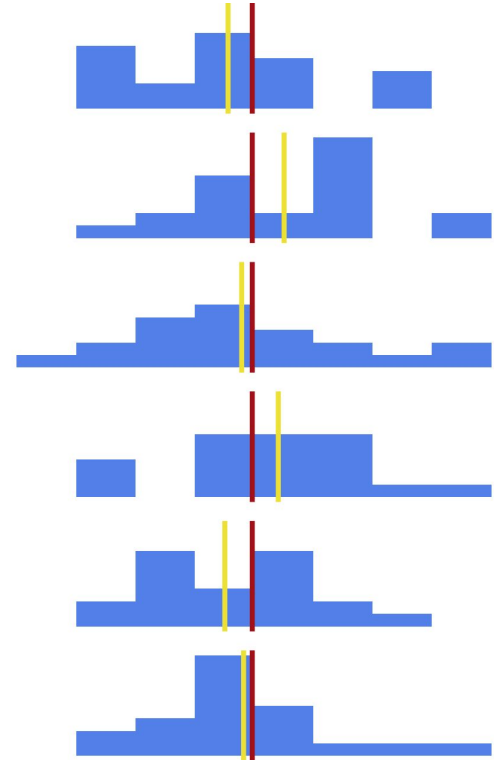
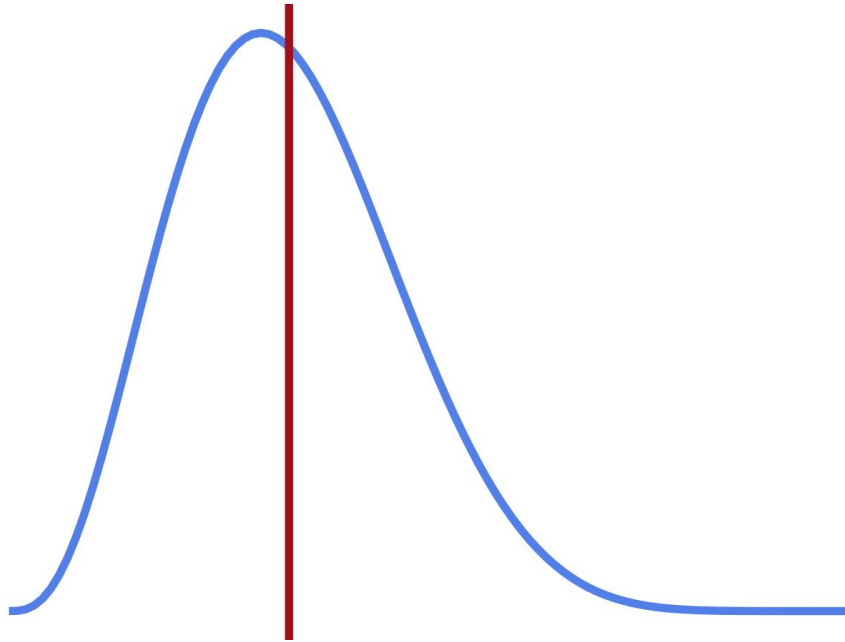
# Week 1 Lecture 1:

## Populations, samples, and parameters

*EDS 222: Statistics for Environmental Data Science*



# Definitions



# Definitions

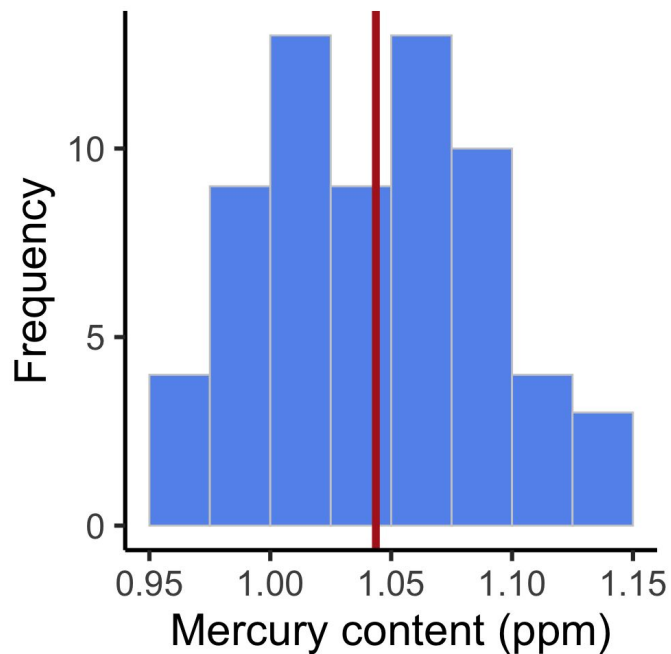
Population

Parameter

Sample

Statistic

# Examples of statistics



Question

Statistic

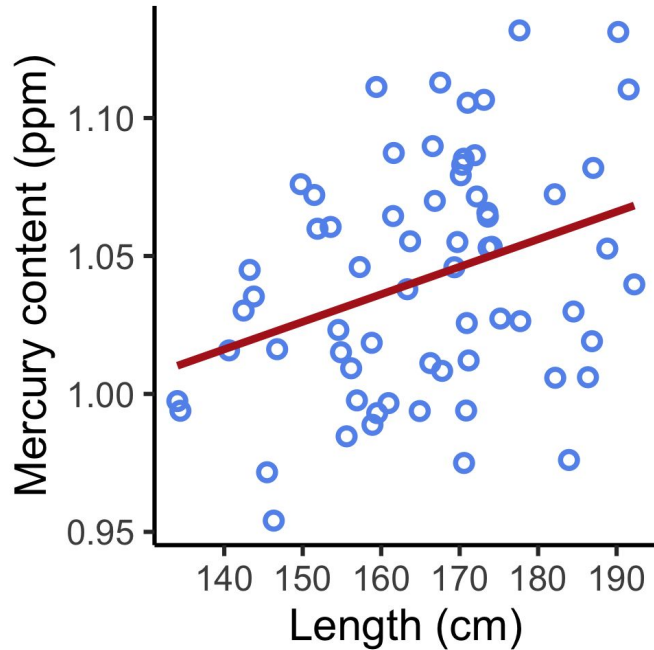
# Examples of statistics

Species	Safe	Unsafe	Total
Swordfish	96	19	115
Tuna	72	10	82
Total	168	29	197

Question

Statistic

# Examples of statistics



Question

Statistic

# Asbestos and mesothelioma

1. Is prolonged asbestos exposure associated with cases of mesothelioma?
2. Do some communities face relatively more risk of asbestos exposure?
3. Will increasing rates of extreme weather events release more asbestos into the environment?
4. Have policies to protect the public from asbestos reduced exposure risks?

# Asbestos and mesothelioma

Question #:

Population

Parameter/Statistic

Sample

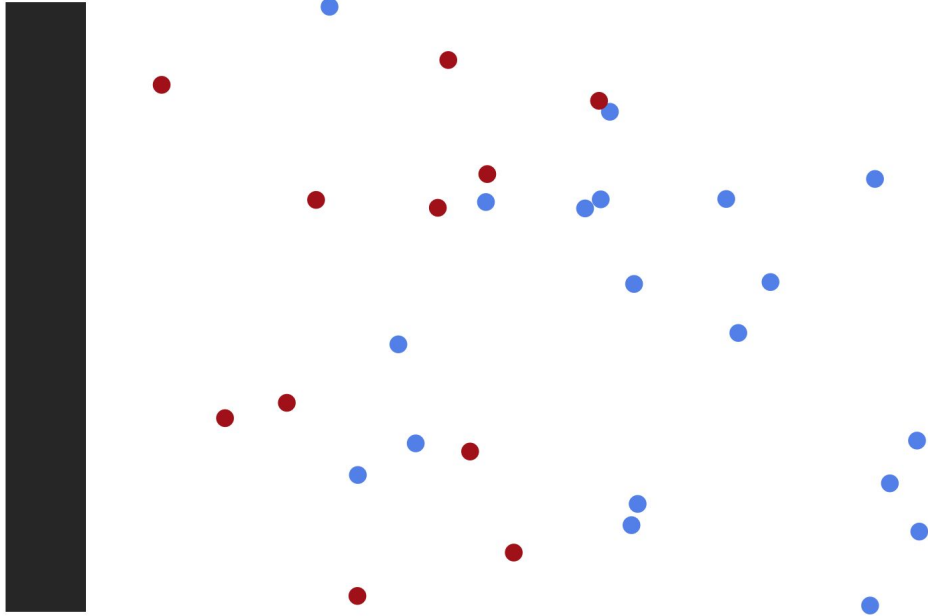


# Asbestos and mesothelioma

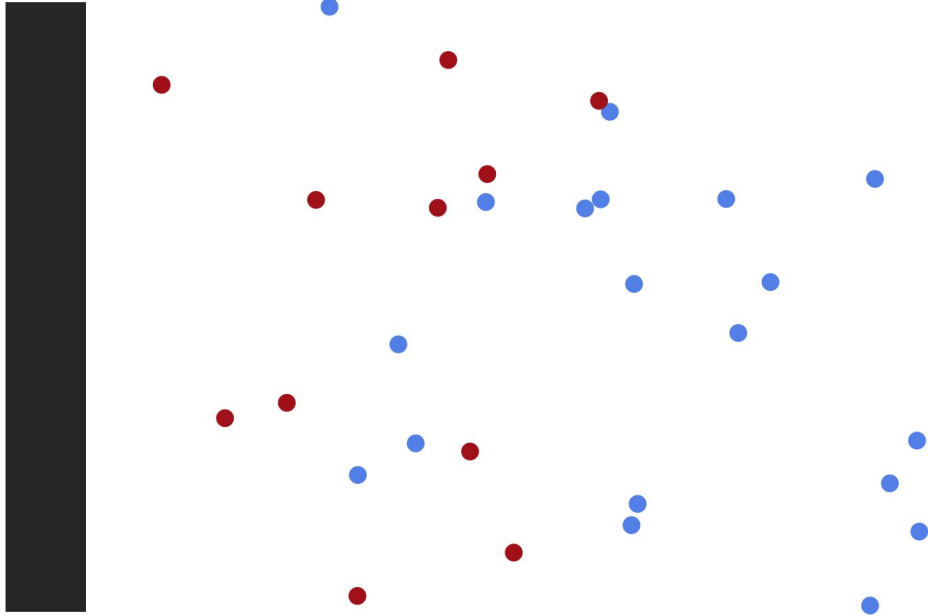
Question #:

Sketch your figure/table here

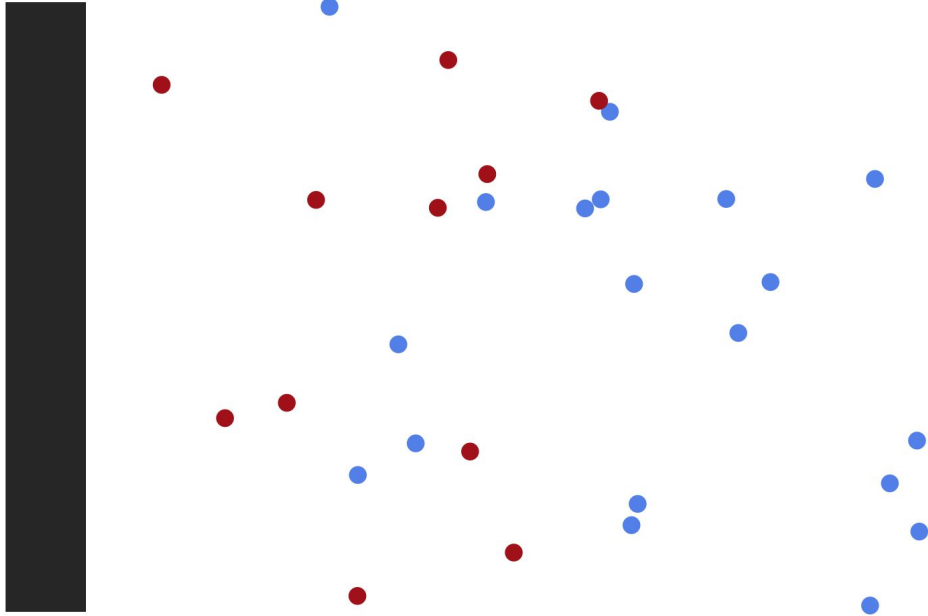
# How do we get samples?



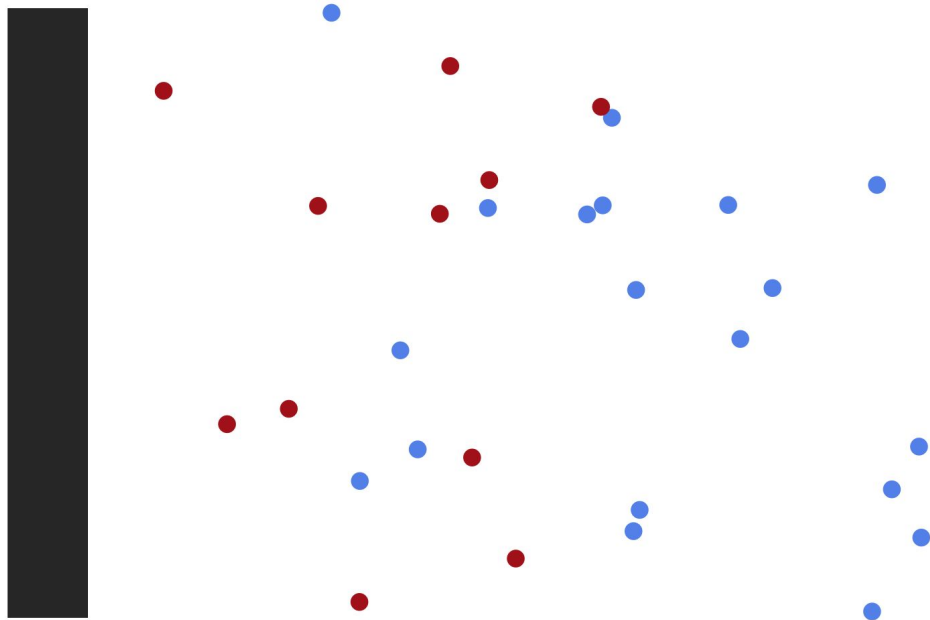
# How do we get samples?



# How do we get samples?



# How do we get samples?



# How do we get samples?

# What do we do with samples?

Exploring uncertainty

Conducting inference

Non-normal data