Statistical Analysis

Part I:
One Variable Statistics

min | median | mode | mean (μ) | max | range | quartile | standard deviation (σ) | histograms | Box Plots

What does the study of data offer us?
Why do we need these skills?

The interpretation of statistics is equally as important as the calculation of statistics!
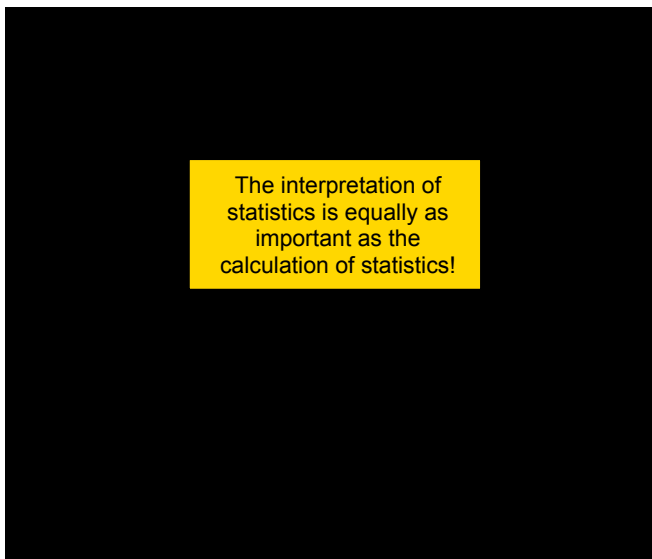
One Variable Statistics

What can we say about this data?
How can we describe it?

Slide 1

Analyse

μ

One Variable Statistics

Which class is smarter?

Class A	Class B
$\mu = 75\%$	$\mu = 80\%$

Slide 2

Analyse

μ

One Variable Statistics

Excel Notation	Meaning	Limitations
=max()		
=average()		
=median()		
=mode()		
=min()		

Slide 3

Analyse

μ

One Variable Statistics

A Dilemma!

If you were the teacher might you think the test was too easy?

What "average mark" would the teacher use to justify the test to the principal?

If you were the student who received 58%, what would you tell your parents that the average on the test was?

Who is "right"? Does the real data change you answers?

(reveal for real data)

Class Size	14
Mean	73.9%
Median	79.0%
Mode	45.0%

Slide 4

Enter

Yoda Tips Part II

Formulas & working with mathematics in Excel

- Mathematical notation
- Functions
- Cell reference versus a constant
- Absolute vs. Relative cell references
- Show formulas
- Grouping & hiding columns and rows
- Changing column and row widths - en masse, to max. cell width
- Conditional Formatting
- Data Filters