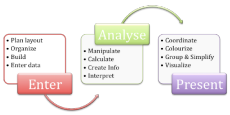
Statistical Analysis

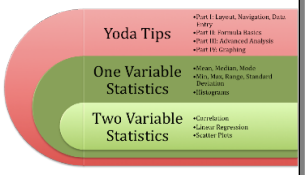
Part II:
Two Variable Statistics



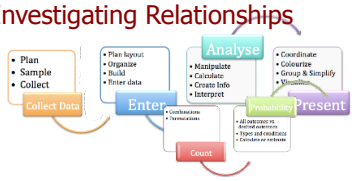
correlation (r) | linear regression (r^2) | scatter plots

How many relationships will there be to examine in a data set?

How do you analyze sub-groups of data?



Investigating Relationships

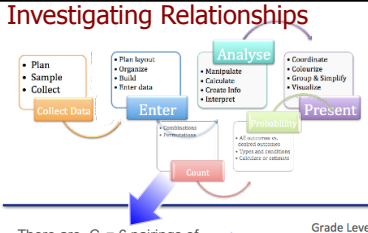


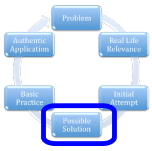
Strategy #1: The matrix

How many relationships will there be to examine in a data set?

Let's use the IRHS data as a learning tool

Investigating Relationships





There are ${}_4C_2 = 6$ pairings of data to compare. What are they?

	Grade Level	Marks	Absences	Lates
Grade Level	X			
Marks	√	X		
Absences	√	√	X	
Lates	√	√	√	X

Basic

Marks vs. Absences
Marks vs. Lates
Marks vs. Grade level
Absences vs. Grade level
Absences vs. Lates
Lates vs. Grade level

Advanced

Break down data like with one-variable analysis.

Try to find a relationship between subject areas and marks, and then rank them?

Investigating Relationships

Strategy #2: The tree diagram

How do you analyze sub-groups of data?

Investigating Relationships

Sub-group analysis

1. Decide which relationship(s) to examine
2. Determine what characteristics would have an impact on this relationship
3. Build a tree diagram to list all the options to examine
4. Calculate the r-value for the options you listed with your tree diagram

NOTE:
This works for one-variable analysis too!