

Choosing the Correct Statistical Test



This activity will help you to:

- Choose the correct statistical test for your coursework data
- Apply the statistical test correctly

There is a range of different statistical tests available. You need to apply the correct one to your data, or the result will be meaningless. In order to choose the correct test, you need to correctly answer three questions:

- What are you testing for?
- What type of data do you have?
- Do you have related or unrelated data?

Decision 1 – what are you testing for?

This is an easy decision to make, because it's already stated in your hypothesis. You are either testing for a **difference** between two sets of data, or a **correlation** between two variables.

What are you testing for?

Decision 2 – what type of data do you have?

There are three types of data you could have.

Nominal	Ordinal	Interval
You have been counting things and putting them into categories (e.g. male/female). Your data are frequencies; they cannot be arranged into rank order, and there is no scale of measurement	You have been measuring things and have data that can be put in rank order of size. However, there is no scale of measurement with equal units.	You have been measuring things on a scale that has equal units (e.g. seconds, centimetres, degrees Celsius).

What type of data do you have?

Decision 3 – are the data related or unrelated?

Related Data	Unrelated Data
Your data consist of paired observations . That is, each datum in set one has a corresponding datum in set two. In practice, this usually means that each pair of measurements came from the same person (either a correlational or repeated measures design).	Each datum is a unique observation (an independent measures design was used).

Are your data related or unrelated?