A Level Psychology
Levels of Measurement

Nominal

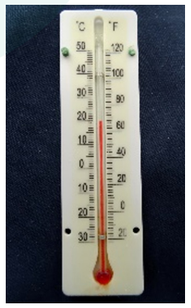
The level of measurement that shows categories of data represented by frequencies. The data sets have no relative numerical value, e.g. boys and girls.

Ordinal

The level of measurement where data can be placed into ascending or descending order, but the intervals between data are not necessarily equal, e.g. the times for first, second and third in a race.

Interval

The level of measurement that has equal numerical intervals between scores, e.g. temperature. The interval between 1 and 2 degrees is the same as between 21 and 22 degrees.



Ratio

The level of measurement that has equal intervals between scores and has an absolute or true zero point, e.g. speed (mph).

On which skills will I be assessed?

AO1: Demonstrate knowledge and understanding of the four levels.

AO2: Apply this knowledge to a novel scenario (Unit 2 and 4), or within inferential statistics and your personal investigations (Unit 4).

What are levels of measurement and what are they used for?

Levels of measurement refer to the way variables/data have been measured within a study. They signify both the type of data that has been collected and how sophisticated/complex the data is. We need to know the level of measurement so that we can correctly identify an appropriate statistical test and draw conclusions about differences across the data set accordingly.

What is the difference between each level?

The main difference is how sophisticated or detailed each measure is. Nominal data is the least sophisticated; it just gives us a very basic picture, e.g. 7 classmates own a dog and 8 do not – we don't know any further details. Ordinal is more complex than nominal, but it still has no relative mathematical value, e.g. we know that key stages at school occur in ascending order from KS1 up to KS5, but how long you spend in each one is not necessarily equal – the numbers are merely labels that can be ranked. Interval data goes one step further in terms of sophistication – the number now means something mathematically and can be compared as such. Finally, ratio is the 'elite' of the data world – it is a form of data that is both interval and has a true zero point. It gives us the most complex picture of all levels of measurement.