

**HIGHER GCSE UNIT SUMMARY: UNIT 3: Averages and range, collecting data, representing data**

3a) Averages and range

Unit Description	Taught	Revision Priority
Design and use two-way tables for discrete and grouped data;		
Use information provided to complete a two-way table;		
Sort, classify and tabulate data and discrete or continuous quantitative data;		
Calculate mean and range, find median and mode from a small data set;		
Use a spreadsheet to calculate mean and range, and find median and mode;		
Recognise the advantages and disadvantages between measures of average;		
Construct and interpret stem and leaf diagrams (including back-to-back diagrams);		
Find the mode, median, range, as well as the greatest and least values from stem and leaf diagrams;		
Compare two distributions from stem and leaf diagrams (mode, median, range);		
Calculate the mean, mode, median and range from a frequency table (discrete data);		
Construct and interpret grouped frequency tables for continuous data;		
For grouped data, find the interval which contains the median and the modal class; estimate the mean with grouped data;		
Understand that the expression 'estimate' will be used where appropriate, when finding the mean of grouped data using mid-interval values.		

3b) Representing and interpreting data and scatter graphs

Unit Description	Taught	Revision Priority
Know which charts to use for different types of data sets;		
Produce and interpret composite bar charts;		
Produce and interpret comparative and dual bar charts;		
Produce and interpret pie charts;		
Find the mode and the frequency represented by each sector;		
Compare data from pie charts that represent different-sized samples;		
Produce and interpret frequency polygons for grouped data;		
Read off frequency values, compare distributions, calculate total population, mean, estimate greatest and least possible values (and range) from frequency polygons;		
Produce frequency diagrams for grouped discrete data;		
Read off frequency values, calculate total population, find greatest and least values;		
Produce histograms with equal class intervals;		
Estimate the median from a histogram with equal class width or any other information, such as the number of people in a given interval;		
Produce line graphs;		
Read off frequency values, calculate total population, find greatest and least values;		
Construct and interpret time-series graphs, comment on trends;		
Compare the mean and range of two distributions, or median or mode as appropriate;		
Recognise simple patterns, characteristics relationships in bar charts, line graphs and frequency polygons;		
Draw and interpret scatter graphs in terms of the relationship between two variables;		
Draw lines of best fit by eye, understanding what these represent;		
Identify outliers and ignore them on scatter graphs;		
Use a line of best fit, or otherwise, to predict values of a variable given values of the other variable;		
Distinguish between positive, negative and zero correlation using lines of best fit, and interpret correlation in terms of the problem;		
Understand that correlation does not imply causality, and appreciate that correlation is a measure of the strength of the association between two variables and that zero correlation does not necessarily imply 'no relationship' but merely 'no linear correlation';		
Explain an isolated point on a scatter graph;		
Use the line of best fit make predictions; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing.		