

Stage 6

Stage 7

Stage 8/Foundation

Stage 9/FH

Stage 10/Higher

Stage 11/Higher+

interpret and construct pie charts and line graphs and use these to solve problems

calculate and interpret the mean as an average

interpret and construct tables, charts and diagrams, including frequency tables, bar charts, pie charts and pictograms for categorical data, vertical line charts for ungrouped discrete numerical data and know their appropriate use

interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate measures of central tendency (median, mean, mode and modal class) and spread (range)

use and interpret scatter graphs of bivariate data	recognise correlation
interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate graphical representation involving discrete, continuous and grouped data	

apply statistics to describe a population

record describe and analyse the frequency of outcomes of probability experiments using tables and frequency trees	apply ideas of randomness, fairness and equally likely events to calculate expected outcomes of multiple future experiments
relate relative expected frequencies to theoretical probability, using appropriate language and the 0 - 1 probability scale	enumerate sets and combinations of sets systematically, using tables, grids, Venn diagrams
construct theoretical possibility spaces for combined experiments with equally likely outcomes and use these to calculate theoretical probabilities	
apply the property that the probabilities of an exhaustive set of outcomes sum to one; apply the property that the probabilities of an exhaustive set of mutually exclusive events sum to one	

interpret and construct tables, charts and diagrams, including tables and line graphs for time series data and know their appropriate use

draw estimated lines of best fit; make predictions

know correlation does not indicate causation; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing

enumerate sets and combinations of sets systematically, using tree diagrams

understand that empirical unbiased samples tend towards theoretical probability distributions, with increasing sample size

calculate the probability of independent and dependent combined events, including using tree diagrams and other representations, and know the underlying assumptions

construct and interpret diagrams for grouped discrete data and continuous data, i.e. cumulative frequency graphs, and know their appropriate use

interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate graphical representation involving discrete, continuous and grouped data, including box plots

interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate measures of central tendency including quartiles and inter-quartile range

infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling

calculate and interpret conditional probabilities through representation using expected frequencies with two-way tables, tree diagrams and Venn diagrams.

construct and interpret diagrams for grouped discrete data and continuous data, i.e. histograms with equal and unequal class intervals and know their appropriate use

Representing data

Statistical enquiry

Probability

