Case	Program
Integer parameters: Number of objects	
Total number of objects in the population	TagAndRelease.py
Number of marked or tagged objects in a population of known size.	MarkedPopulation.py
Total number in a population that is serially labelled (i.e. 1st, 2nd, 3rd etc)	FamilySize.py
Proportion/Fraction type parameter	
One parameter	ProportionParameter.py
Difference between two proportions/fractions	DifferenceProportionParameter.py
Compare multiple proportions/fractions	MultiProportionParameter.py
Multiple fractions vs. dose - logistic response model	ProportionDoseResponse.py
Rate constant type parameters, e.g. Poisson process	
Rare events, no background	RareCounts.py
Rare events with background	RareCountsBackgnd.py
Multiple observations of rare events	MultiRareCounts.py
Measures of central tendency and spread: The Mean and Standard Deviation of a population	
Standard model: Gaussian (or normally distributed) noise	MeanStdDev.py
Large values of noise or errors occurs more frequently than normal	MeanStdDevFatTailNoise.py
Compare two means and/or two variances (Bayesian replacement for 'T'-test and 'F'-test)	DifferenceInMeans.py
Compare two means when the raw data is not available: only have summary data	DiffMeansFromStats.py
Compare multiple means. Hierarchical model with hyper-parameters. (Bayesian replacement for ANOVA)	MultiMeanHierarchy.py
Non-parametric comparison of populations	
Rank test (Bayesian replacement for Wilcoxen rank test)	RankTest.py+DifferenceInMeans.py
Population ID (Classification)	PopulationID.xls
Survival/Decay type data	
Exponential decay in time or space	DecayTimeLength.py
General decay in time or space (Survival analysis)	SurvivalWeibull.py
Curve Fitting	
Straight line	LinearRegression.py
Polynomial	CurveFitBIC.py
Sinusoidal	PeriodicSeries.py
General	
Change/difference in a parameter given two posterior pdfs	DiffPdf.py, CombineTwoPdfs.py
Multiply two pdfs, e.g. likelihood and prior	CombineTwoPdfs.py