Assignment 6

Due in 2023-03-03, 00:00 EST.

1. Draw a sample of 100 persons and let x be the total of a soft drink. The responses were collected on a 5 point scale.

(a) Compute the likelihood in its simplest form.

(b) Find the maximum likelihood estimate.

(c) Let k be the mean of the observations.

(d) Compute the standard error of the mean.

(e) Plot the distribution function.

(f) Compute the confidence interval for the mean at 95% confidence level.

2. A sample of 100 persons were chosen to estimate the mean age and standard error of people responding to the question in the data below.

(a) Compute the likelihood function.

(b) Find the maximum likelihood estimate.

(c) Let k be the mean of the observations.

(d) Compute the standard error of the mean.

(e) Plot the distribution function.

(f) Compute the confidence interval for the mean at 95% confidence level.

3. A sample of 100 persons were chosen to estimate the mean age and standard error of people responding to the question in the data below.

(a) Compute the likelihood function.

(b) Find the maximum likelihood estimate.

(c) Let k be the mean of the observations.

(d) Compute the standard error of the mean.

(e) Plot the distribution function.

(f) Compute the confidence interval for the mean at 95% confidence level.

4. A sample of 100 persons were chosen to estimate the mean age and standard error of people responding to the question in the data below.

(a) Compute the likelihood function.

(b) Find the maximum likelihood estimate.

(c) Let k be the mean of the observations.

(d) Compute the standard error of the mean.

(e) Plot the distribution function.

(f) Compute the confidence interval for the mean at 95% confidence level.

5. A sample of 100 persons were chosen to estimate the mean age and standard error of people responding to the question in the data below.

(a) Compute the likelihood function.

(b) Find the maximum likelihood estimate.

(c) Let k be the mean of the observations.

(d) Compute the standard error of the mean.

(e) Plot the distribution function.

(f) Compute the confidence interval for the mean at 95% confidence level.