KEY

1. Often, a data set is described symbolically as X_1, X_2, ..., X_n. Using
the following data set: 10, 5, 15, 5 (X_1, X_2, X_3, X_4 respectively),
compute:

[a] $\sum_{i=1}^{3} X_i = 10 + 5 + 15$
$= 30$

[b] $\sum_{i=2}^{4} X_i = 5 + 15 + 5$
$= 25$

[c] $\sum X = 10 + 5 + 15 + 5$
$= 35$

2. What information is provided in a confidence interval for the
mean?

A confidence interval provides a range of likely values for the population mean.

3. The figure below shows the distribution for a particular value
measured on individuals from a particular population. Sketch in
what the distribution of the mean of samples of size n would like.
Be sure to label the dispersion or variation of this distribution
of the sample means. (If you need n to be a number, just say it's
10.)

$\sigma_{\bar{X}} = \dfrac{\sigma}{\sqrt{n}}$ or $\dfrac{\sigma}{\sqrt{10}}$ (in this case)

σ

$\mu - 2\sigma$ $\mu - \sigma$ μ $\mu + \sigma$ $\mu + 2\sigma$