

Formulas for Mid-Term

n = sample size

N = population size

\bar{x} = mean

s^2 = variance

s = standard deviation

In all of our examples that involve either the variance or the standard deviation, the distinction between sample and population is not relevant (in terms of $n-1$ or n). Always use whatever formula is provided to you on this sheet.

$$\bar{x} = \frac{\sum x_i}{n}$$

$$S.E.(\bar{x}) = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n(n-1)}}$$

$$C.I. = \pm 1.96[S.E.(\bar{x})]$$