

## Technical Paper 13

### Confidence intervals for means

- A. Measure of mean and certainty associated with that estimate.
- B. Confidence intervals are applicable to ratio and interval scale data
- C. The confidence interval has the same units as the individual observations.
- D. Population standard deviation is known
  - 1. Use table A to determine Z-score for appropriate level of certainty.

$$\mu = \bar{x} \pm Z\sigma_{\bar{x}}$$

- E. Population standard deviation is not known
  - 1. Use table B to determine t for appropriate level of certainty.

$$\mu = \bar{x} \pm t_{\alpha, \nu} s_{\bar{x}}$$

where  $\nu = n - 1$