

## On Coverage Probability of Confidence Intervals for the Normal Mean with Known Coefficient of Variation

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**Abstract :** Statistical inference of normal mean with known coefficient of variation has been investigated recently. This phenomenon occurs normally in environment and agriculture experiments when the scientist knows the coefficient of variation of their experiments. In this paper, we constructed new confidence intervals for the normal population mean with known coefficient of variation. We also derived analytic expressions for the coverage probability of each confidence interval. To confirm our theoretical results, Monte Carlo simulation will be used to assess the performance of these intervals based on their coverage probabilities.

**Keywords :** confidence interval, coverage probability, expected length, known coefficient of variation

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