



[Use navigation panel to go to the desired topic or scroll down for contents]

---

# Contents

## Discrete Distributions

---

1. Binomial Distribution
  - 1.1. Calculation of cumulative probabilities, percentiles and moments
  - 1.2. Tests for proportions and power calculation
  - 1.3. Confidence intervals, prediction intervals, tolerance intervals and sample size calculation
  - 1.4. Tests for comparing proportions and power calculation: Fisher's test, difference, relative risk, odds ratio
2. Discrete Uniform Distribution  
Calculation of cumulative probabilities, percentiles and moments
3. Geometric Distribution  
Calculation of cumulative probabilities, percentiles and moments
4. Hypergeometric Distribution
  - 4.1. Calculation of cumulative probabilities, percentiles and moments
  - 4.2. Tests for proportions and sample size power
  - 4.3. Confidence intervals for proportion and sample size for precision
  - 4.4. Tests for the difference between two proportions and power calculation
5. Logarithmic Series Distribution  
Calculation of cumulative probabilities, percentiles and moments
6. Negative Binomial Distribution
  - 6.1. Calculation of cumulative probabilities, percentiles and moments
  - 6.2. Test and for the proportion
7. Poisson Distribution
  - 7.1. Calculation of cumulative probabilities, percentiles and moments
  - 7.2. Tests and confidence intervals for the mean and power calculation
  - 7.3. Tests and confidence intervals for comparing two means and power calculation
  - 7.4. Tolerance intervals and prediction intervals

## Continuous Distributions

---

8. Beta Distributions
  9. Bivariate Normal
    - 9.1. Computation of tail probabilities
    - 9.2. Test and confidence interval for correlation coefficient
    - 9.3. Test and confidence interval for the difference between two correlation coefficients
    - 9.4. Test and confidence interval for the ratio of two dependent variances
-

## Contents

---

- 9.5. [Multiple correlation coefficient](#)
  - 9.6. [Tolerance factors for multivariate normal distribution](#)
  - 10. [Cauchy Distribution](#)
  - 11. [Chisquare Distribution](#)
  - 12. [Exponential Distribution](#)
  - 13. [Extreme Value Distribution](#)
  - 14. [F Distribution](#)
  - 15. [Gamma Distribution](#)
    - 15.1. [Calculation of cumulative probabilities, percentiles and moments](#)
    - 15.2. [Tests and confidence intervals for the mean and parameters](#)
    - 15.3. [Tests and confidence intervals for the mean difference and parameters](#)
    - 15.4. [Tolerance intervals and prediction intervals](#)
  - 16. [Inverse Gaussian Distribution](#)
    - 16.1. [Calculation of cumulative probabilities, percentiles and moments](#)
    - 16.2. [Test and confidence interval for the mean](#)
    - 16.3. [Test and confidence intervals for comparing two means](#)
  - 17. [Laplace Distribution](#)
    - 17.1. [Calculation of cumulative probabilities, percentiles and moments](#)
    - 17.2. [Confidence intervals for parameters](#)
    - 17.3. [Prediction intervals](#)
    - 17.4. [Tolerance intervals](#)
  - 18. [Logistic Distribution](#)
    - 18.1. [Calculation of cumulative probabilities, percentiles and moments](#)
    - 18.2. [Confidence intervals for parameters](#)
    - 18.3. [Prediction intervals](#)
    - 18.4. [Tolerance intervals](#)
  - 19. [Lognormal Distribution](#)
    - 19.1. [Calculation of cumulative probabilities, percentiles and moments](#)
    - 19.2. [Confidence interval and test for the mean](#)
    - 19.3. [Tests and confidence intervals for comparing two means](#)
    - 19.4. [Confidence interval for the ratio of two lognormal means](#)
  - 20. [Noncentral Chisquare Distribution](#)
  - 21. [Noncentral F Distribution](#)
  - 22. [Noncentral t Distribution](#)
  - 23. [Normal Distribution](#)
-

## Contents

---

- 23.1. Calculation of cumulative probabilities, percentiles and moments
- 23.2. Tests and confidence intervals for the mean and sample size for power
- 23.3. Tests and confidence intervals for comparing two means and power calculation
- 23.4. Tolerance and prediction intervals
- 23.5. Test and confidence intervals for coefficient of variation and for comparing two coefficients of variation
- 24. Pareto Distribution
  - Calculation of cumulative probabilities, percentiles and moments
- 25. Rayleigh Distribution
  - Calculation of cumulative probabilities, percentiles and moments
- 26. Student's  $t$  Distribution
  - 26.1. Calculation of cumulative probabilities, percentiles and moments
  - 26.2. Distribution of the maximum of independent  $t$  variables
- 27. Weibull Distribution
  - 27.1. Calculation of cumulative probabilities, percentiles and moments
  - 27.2. Confidence intervals for parameters and survival probability
  - 27.3. Prediction intervals and Tolerance Intervals
  - 27.4. Factors of Upper Prediction Limits

## Nonparametric Distribution

---

- 28. Distribution of Runs
  - 29. Sign Test and Confidence Intervals for Median
  - 30. Wilcoxon Signed-Rank Test
  - 31. Wilcoxon Rank-Sum Test
  - 32. Sample Size for Nonparametric Tolerance Intervals
-