

# CHI SQUARE FORMULA

Chi-square is an analysis of data based on some observations of random variables. It is represented as  $\chi^2$ . Provide an introduction to chi-squared tests and their importance in statistics. Chi-square has invaluable significance in statistics. It can be used for comparing two data. This test was coined by Karl Pearson in the year 1900.

[Read more](#)



### **Q1: What does a high chi-squared statistic value indicate in a chi-squared test?**

- A: Strong connection between variables
  - B: Weak link with variables
  - C: No connection with variables
  - D: Incomplete data
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### **Q2: What are the degrees of freedom in a chi-squared test?**

- A: A measure of the number of data points
  - B: Measurement of spread of data
  - C: The number of rows subtract columns
  - D: (Rows - 1) multiply with (Columns - 1) for a cross tabulation table
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### **Q3: What does a p-value in a chi-squared test reflect?**

- A: Data proportion that fits the expected distribution
  - B: Probability of getting the observed results by chance
  - C: Association strength between variables
  - D: Degrees of freedom
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### **Q4: How to represent chi-square?**

- A:  $x^2$
  - B:  $y^2$
  - C:  $z^2$
  - D: None of the above
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### **Q5: How is chi-square useful?**

- A: Data distribution
  - B: In a relationship with two variables
  - C: Data Analysis
  - D: both B and C
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**Q6: What is the formula for chi-square?**

A:  $\chi^2 = \sum(O_i - E_i)^2/E$

B:  $Y^2$

C: none of the above

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**Q7: Is Chi-square useful in present life?**

A: Yes

B: No

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**Q8: Where is the usefulness of chi-square?**

A: Comparing two data

B: Analysis of two data

C: Draw conclusions

D: All of the Above

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**Q9: What are two types of hypotheses in chi-square?**

A: Null hypothesis

B: Alternative

C: Both A and B

D: None of the above

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**Q10: What is the objective of chi-square?**

A: Population

B: Distribution

C: Find the relationship between the variable

D: None of them

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## Answers

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**Q1:** A - Strong connection between variables

**Q2:** D - (Rows - 1) multiply with (Columns - 1) for a cross tabulation table

**Q3:** B - Probability of getting the observed results by chance

**Q4:** A -  $x^2$

**Q5:** D - both B and C

**Q6:** A -  $x^2 = \sum(O_i - E_i)^2/E$

**Q7:** A - Yes

**Q8:** D - All of the Above

**Q9:** C - Both A and B

**Q10:** C - Find the relationship between the variable