

Foundations of Statistics and Probability

Mathematics · Practice Test · 18 Questions

1. Who is credited with publishing 'Ars Conjectandi' (The Art of Conjecturing), which introduced the first law of large numbers?

- A) Blaise Pascal
- B) Jacob Bernoulli
- C) Pierre-Simon Laplace
- D) Carl Friedrich Gauss

2. Which mathematician is famous for creating the 'Normal Distribution' curve, often represented by the bell curve?

- A) Abraham de Moivre
- B) Thomas Bayes
- C) Carl Friedrich Gauss
- D) John Graunt

3. In 1662, who published 'Natural and Political Observations Made upon the Bills of Mortality', laying the foundation for demography and statistics?

- A) John Graunt
- B) William Petty
- C) Edmond Halley
- D) Francis Galton

4. The concept of 'Regression to the Mean' was first described by which scientist in the late 19th century while studying heredity?

- A) Karl Pearson
- B) Ronald Fisher
- C) Francis Galton
- D) Adolphe Quetelet

5. Which French mathematician is credited with introducing the 'Bayes' Theorem' in a posthumously published essay in 1763?

- A) Thomas Bayes
- B) Pierre-Simon Laplace
- C) Siméon Denis Poisson
- D) Richard Price

6. Who developed the 'Chi-squared test', a fundamental statistical method used to determine if there is a significant difference between expected and observed frequencies?

- A) William Sealy Gosset
- B) Karl Pearson
- C) Ronald Fisher
- D) Charles Spearman

7. Which statistician published 'Statistical Methods for Research Workers' in 1925, which introduced the concept of the 'p-value' and analysis of variance (ANOVA)?

- A) Ronald Fisher
- B) Karl Pearson
- C) Jerzy Neyman
- D) Egon Pearson

8. The term 'Percentile' was first introduced in 1885 by which polymath?

- A) Francis Galton
- B) Karl Pearson
- C) Adolphe Quetelet
- D) Charles Babbage

9. Which mathematician developed the 'Poisson Distribution' in 1837 to describe the probability of a given number of events occurring in a fixed interval of time?

- A) Siméon Denis Poisson
- B) Blaise Pascal
- C) Pierre-Simon Laplace
- D) Jean-Baptiste Joseph Fourier

10. Who is considered the first to apply statistical methods to social phenomena, calling it 'Social Physics'?

- A) Adolphe Quetelet
- B) Emile Durkheim
- C) Auguste Comte
- D) Herbert Spencer

11. The 'Student's t-distribution' was published in 1908 by William Sealy Gosset under what pseudonym?

- A) Professor X
- B) Student
- C) Statistician
- D) Anonymous

12. Who famously used the 'Least Squares' method to predict the orbit of the asteroid Ceres in 1801?

- A) Carl Friedrich Gauss
- B) Adrien-Marie Legendre
- C) Pierre-Simon Laplace
- D) Leonhard Euler

13. Which mathematician wrote the first treatise on probability theory, 'Liber de Ludo Aleae' (Book on Games of Chance)?

- A) Gerolamo Cardano
- B) Blaise Pascal
- C) Pierre de Fermat
- D) Christiaan Huygens

14. The term 'Standard Deviation' was introduced in 1894 by which British statistician?

- A) Karl Pearson
- B) Francis Galton
- C) Ronald Fisher
- D) William Sealy Gosset

15. Who is credited with creating the 'Box Plot' (or box-and-whisker plot) in 1977?

- A) John Tukey
- B) Karl Pearson
- C) Ronald Fisher
- D) David Cox

16. Which mathematician is known for the first systematic study of probability related to 'Pascal's Triangle'?

- A) Blaise Pascal
- B) Pierre de Fermat
- C) Jacob Bernoulli
- D) Gerolamo Cardano

17. The first life table, which estimated the probability of death at different ages, was created in 1693 by which astronomer?

- A) Edmond Halley
- B) John Graunt
- C) Isaac Newton
- D) William Petty

18. Who developed the concept of 'Correlation' and the product-moment correlation coefficient?

- A) Karl Pearson
- B) Francis Galton
- C) Charles Spearman
- D) Ronald Fisher