

## Statistics Trivia: Questions, Answers, and Facts

### Printable Trivia Pack

Statistics trivia opens a playful window onto the science of collecting, analyzing, and interpreting data, a field shaped over centuries by work in probability, government recordkeeping, and modern research. From averages and outliers to famous paradoxes and real-world number sense, these questions offer an engaging way to test what you know and pick up surprising facts along the way.

#### HARD STATISTICS TRIVIA

1. Which nonparametric procedure is specifically used to compare two independent groups when you do not want to assume normality?

Answer: Mann-Whitney U test

2. A statistician wants to check whether data are consistent with a normal distribution before choosing a parametric method. Which named test is built for that assessment?

Answer: Shapiro-Wilk test

3. What test can be used to compare a sample distribution to a reference distribution, or even compare two sample distributions directly?

Answer: Kolmogorov-Smirnov test

4. You are handed a contingency table full of categorical counts and asked whether the variables are associated. Which test is the standard choice?

Answer: chi-square test of independence

5. The acronym ANOVA expands to what full phrase?

Answer: analysis of variance

6. Which classic inferential tool is commonly used when the goal is to compare means?

Answer: t-test

7. Which model expresses a binary response through the log-odds scale rather than modeling the outcome directly on the original probability scale?

Answer: logistic regression

8. Name the estimation method that finds regression coefficients by minimizing the sum of squared residuals.?

Answer: ordinary least squares

9. Which estimation framework picks parameter values by maximizing the likelihood function itself?

Answer: maximum likelihood estimation

10. What inferential approach updates prior beliefs after observed data arrive?

Answer: Bayesian inference

11. In model selection shorthand, what does the abbreviation AIC stand for?

Answer: Akaike Information Criterion

12. Its close cousin BIC gets all the attention too, but what is the full name behind that abbreviation?

Answer: Bayesian Information Criterion

13. What term describes the regression problem in which error variance changes across observations instead of staying constant?

Answer: heteroscedasticity

14. When predictor variables in a regression model are strongly correlated with one another, what is that issue called?

Answer: multicollinearity

## FUNNY STATISTICS TRIVIA

1. Which author literally wrote the book on numerical nonsense, How to Lie with Statistics?

Answer: Darrell Huff

2. How to Lie with Statistics first appeared in what year, long before spreadsheets could help?

Answer: 1954

3. Who wrote Naked Statistics, proving even statistics can show up without extra layers?

Answer: Charles Wheelan

4. All of Statistics sounds ambitious. Who was bold enough to write it?

Answer: Larry Wasserman

5. When your input data is a dumpster fire, what four-letter abbreviation often summarizes the outcome?

Answer: GIGO

6. What famous collection of four data sets behaves like statistical triplets who all got the same report card?

Answer: Anscombe's quartet

7. Which paradox pulls the sneaky trick of reversing an association after data are combined?

Answer: Simpson's paradox

8. What probability puzzle asks whether people in a group share a birthday, turning cake into combinatorics?

Answer: The birthday problem

9. In the classic birthday problem, how many people are enough for the chance of a shared birthday to exceed 50 percent?

Answer: 23

10. The Monty Hall problem gets its name from whom, the host of Let's Make a Deal?

Answer: Monty Hall

11. Which bias is famously illustrated by Abraham Wald studying where returning WWII aircraft had damage?

Answer: Survivorship bias

12. What fallacy shows up when legal reasoning mixes up conditional probabilities and then acts very confident about it?

Answer: The prosecutor's fallacy

13. What do we call it when someone keeps trying analyses until a tiny p-value finally pops out like a carnival prize?

Answer: P-hacking

#### FUN STATISTICS TRIVIA

1. What distribution is so famously hump-shaped that it's often nicknamed the bell curve?

Answer: The normal distribution.

2. If you're counting how many events happen in a fixed interval, which distribution is the classic go-to model?

Answer: The Poisson distribution.

3. Which distribution models the number of successes in a fixed number of trials?

Answer: The binomial distribution.

4. A Bernoulli trial is the statistical version of a dramatic coin flip: how many possible outcomes does it have?

Answer: Exactly two outcomes.

5. Which famous theorem says that many sample means tend to look normal, even when the original data may not?

Answer: The central limit theorem.

6. What law says sample averages tend to approach the expected value as you gather more data?

Answer: The law of large numbers.

7. What statistic tells you how many standard deviations a value sits from the mean?

Answer: The z-score.

8. Which graph gives a quick snapshot of a data set using the median and quartiles?

Answer: A box plot.

9. In quartile land, what name is given to  $Q_3$  minus  $Q_1$ ?

Answer: The interquartile range.

10. Which quartile is also known as the 25th percentile?

Answer: The first quartile.

11. At the 75th percentile, which quartile have you reached?

Answer: The third quartile.

12. In hypothesis testing shorthand, what does  $H_0$  usually stand for?

Answer: The null hypothesis.

13. If a researcher writes  $H_1$  or  $H_a$ , which hypothesis are they usually naming?

Answer: The alternative hypothesis.

#### STATISTICS FAMILY TRIVIA

1. Which nurse and pioneer used statistical graphics to show mortality data clearly?

Answer: Florence Nightingale

2. Who is known for early analysis of London's Bills of Mortality?

Answer: John Graunt

3. The Pearson correlation coefficient is named after which statistician?

Answer: Karl Pearson

4. Spearman's rank correlation gets its name from whom?

Answer: Charles Spearman

5. Bayes' theorem is named after which person?

Answer: Thomas Bayes

6. Who gave modern probability its axiomatic foundation?

Answer: Andrey Kolmogorov

7. Which early pioneer is especially linked with both regression and correlation?

Answer: Francis Galton

8. Who wrote the work titled *Ars Conjectandi*?

Answer: Jacob Bernoulli

9. In what year was *Ars Conjectandi* published?

Answer: 1713

10. Who popularized the term Exploratory Data Analysis?

Answer: John Tukey

11. John Tukey published *Exploratory Data Analysis* as a book in which year?

Answer: 1977

12. Which statistician published under the pen name "Student"?

Answer: William Sealy Gosset

#### EASY STATISTICS TRIVIA

1. What is the arithmetic mean more commonly called in everyday language?

Answer: The arithmetic mean is commonly called the average.

2. In an ordered data set, what do you call the middle value?

Answer: The middle value in an ordered data set is the median.

3. Which term means the value that appears most often in a data set?

Answer: The value that appears most often is the mode.

4. What kind of chart is commonly used to compare categories?

Answer: A bar chart is used to compare categories.

5. Which graph shows the distribution of numerical data using bins?

Answer: A histogram displays the distribution of numerical data using bins.

6. If you want to show the relationship between two quantitative variables, which graph should you use?

Answer: A scatter plot is used to show the relationship between two quantitative variables.

7. Standard deviation is the square root of what?

Answer: Standard deviation is the square root of variance.

8. In statistics, what term means every member of the group being studied?

Answer: Every member of the group being studied is the population.

9. What do statisticians call a subset taken from a population?

Answer: A subset taken from a population is called a sample.

10. True or false: Correlation proves that one thing causes another.?

Answer: False

11. What statistical quantity is commonly used in hypothesis testing?

Answer: A p-value is used in hypothesis testing.

12. Rejecting a true null hypothesis is called what kind of error?

Answer: Rejecting a true null hypothesis is a Type I error.

13. Between what two numbers do probability values range?

Answer: Probability values range from 0 to 1.

Source: <https://triviagong.com/themes/statistics>