47 Math Skills Interview Questions to Ask Analysts and Candidates

Questions

1. How would you explain the concept of compound interest to a client?

2. If you flip a coin 10 times and get heads each time, what's the probability of getting tails on the 11th flip?

3. How would you calculate the median for an even number of values?

4. If you have a square with an area of 16 square meters, what is the length of its diagonal?

5. How would you approach estimating the number of tennis balls that could fit in a school bus?

6. How would you calculate the percentage increase if a company's revenue grows from $200,000 to $250,000?

7. If you need to distribute 60 reports evenly across 4 analysts, how many reports does each analyst receive?

8. What is the formula for calculating the area of a triangle and can you apply it to find the area of a triangle with a base of 10 cm and a height of 5 cm?

9. If a data set contains the numbers 3, 7, 7, 2, and 9, what is the mode of the data set?

10. Explain what a standard deviation represents in a data set. How would you interpret a high standard deviation?

11. You have a list of exam scores: 85, 90, 75, 95, and 80. How would you find the average score?

12. Can you explain the difference between correlation and causation in your own words?

13. If a company's expenses are $150,000 and their income is $200,000, what is their profit margin?

14. How would you approach finding the slope of a line if you are given two points, (2, 3) and (6, 7)?

15. How would you explain the concept of confidence intervals to a non-technical stakeholder?

16. How would you determine if there's a significant difference in customer satisfaction scores between two product versions?

17. Explain the concept of regression to the mean and provide a real-world example where it might occur.

18. How would you approach forecasting sales for a new product with limited historical data?

19. How would you explain the difference between causation and correlation to a marketing team?

20. How would you determine the sample size needed for a customer survey to be statistically significant?

21. Explain how you would use a moving average to identify trends in time series data.

22. How would you explain the concept of statistical power to a non-technical team member?

23. How would you explain the law of large numbers to someone unfamiliar with statistics?

24. Can you describe a real-world scenario where you would use a binomial distribution?

25. What is the difference between a permutation and a combination, and when would you use each?

26. How would you explain the concept of p-value to a non-technical colleague?

27. What is Bayes' Theorem and how would you apply it in a practical situation?

28. How do you determine if a dataset follows a normal distribution?

29. Can you explain what a confidence interval is and how you would interpret it?

30. What are Type I and Type II errors in hypothesis testing, and why are they important?

31. How would you use a chi-square test in a data analysis project?

32. Can you explain the Central Limit Theorem and its significance in statistics?

33. How would you calculate and interpret the correlation coefficient between two variables?

34. How do you assess the goodness-of-fit for a statistical model?

35. How would you solve a system of two linear equations with two unknowns?

36. Can you explain what a quadratic equation is and provide a real-world example of its application?

37. How would you approach factoring a polynomial expression?

38. Explain the concept of a function in algebra and how it differs from an equation.

39. How would you solve an exponential equation?

40. Can you explain what a logarithm is and provide an example of its use in a real-world scenario?