62 Cognitive Ability Interview Questions to Hire Top Talent

Questions

1. How would you estimate the number of tennis balls that can fit in a Boeing 747?

2. If you have a 5-gallon jug and a 3-gallon jug, how would you measure exactly 4 gallons?

3. What is the next number in this sequence: 2, 4, 8, 16, ...?

4. How many times do the hands of a clock overlap in 24 hours?

5. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?

6. You have a fox, a chicken, and a sack of grain. You must cross a river with only one of them at a time. If you leave the fox with the chicken, the fox will eat the chicken. If you leave the chicken with the grain, the chicken will eat the grain. How do you get all three across safely?

7. What is the minimum number of colors needed to color any map so that no two adjacent countries are the same color?

8. If you have a square room with no roof, and you had to get rain to cover exactly half the floor, how would you do it?

9. How many degrees are there between the hour and minute hands of an analog clock at 3:15?

10. If you have 8 balls of the same size and appearance, but one is slightly heavier than the rest, how would you find the heavier ball using a balance scale in just two weighings?

11. What is the probability of getting at least one 'heads' when flipping a coin three times?

12. If a train travels 50 miles per hour for 3 hours in one direction, then travels back at 100 miles per hour, what is the average speed for the entire trip?

13. How many times would you have to fold a piece of paper for its thickness to reach the moon?

14. If you have a 3x3x3 cube made up of 27 smaller cubes, how many of the smaller cubes are not visible from the outside?

15. In a room of 30 people, what's the probability that at least two people share the same birthday?

16. How would you explain a complex data analysis to a non-technical stakeholder?

17. You're given a dataset with missing values. How would you approach this problem?

18. Describe a situation where you had to prioritize multiple tasks with competing deadlines. How did you manage it?

19. If you noticed an unexpected spike in user engagement for a specific product feature, how would you investigate the cause?

20. How would you design an A/B test to evaluate the effectiveness of a new website layout?

21. You've been asked to forecast sales for the next quarter. What factors would you consider, and how would you approach this task?

22. Explain how you would detect and handle outliers in a dataset.

23. How would you go about cleaning and preparing a large, messy dataset for analysis?

24. How would you determine the median of a dataset that contains both numerical and categorical values?

25. Describe a time when you had to analyze data under a tight deadline. How did you ensure accuracy?

26. What approach would you take to identify trends in a dataset with thousands of entries?

27. If you were given an incomplete dataset, how would you handle the missing data points?

28. Explain how you would validate the results of a complex analysis to ensure reliability.

29. How would you approach optimizing an inefficient algorithm in an existing system?

30. Describe a situation where you had to simplify a complex problem to find a solution. What steps did you take?

31. How would you approach training a junior analyst on a complex data analysis task?

32. If you had to present your analysis findings to a non-technical audience, how would you ensure clarity and understanding?

33. Explain how you would approach debugging an error in a large dataset.

34. Describe a time when you had to use creative thinking to solve a data-related problem.

35. What steps would you take to ensure that your analysis aligns with business objectives and stakeholder expectations?

36. How would you go about estimating the weight of all the cars in your city?

37. You have a 9x9x9 Rubik's Cube. How many small cubes are on the edges?

38. How would you design a system to detect fraudulent transactions in real-time for an e-commerce platform?

39. If you had to create a strategy for cataloging every book in a library, how would you approach it?

40. How would you determine if a number is a prime number?

41. How would you go about scheduling shifts for a 24/7 restaurant with 20 employees?

42. If you were tasked with improving the efficiency of a busy intersection, what factors would you consider and what solutions might you propose?

43. Describe a time when you had to make a decision without having all the necessary information. How did you approach it?

44. If you encounter a situation where multiple solutions are possible, how do you determine the best one?

45. You have two ropes of unequal length and thickness. Each rope takes exactly one hour to burn. How do you measure exactly 45 minutes?

46. How would you solve a problem if you were unable to use your preferred method or tool?

47. Explain how you would approach solving a complex puzzle that you've never seen before.

48. Imagine you have three switches, each connected to one of three light bulbs in another room. You can only enter the room once. How do you determine which switch is connected to which bulb?

49. A man is looking at a portrait. Someone asks him, 'Whose picture are you looking at?' The man replies, 'Brothers and sisters, I have none. But the father of the man in the picture is my father's son.' Who is in the picture?

50. How would you determine if a machine in a factory is underperforming using limited data?

51. What steps would you take if a project you were leading suddenly encountered an unexpected obstacle?

52. You are given a large dataset with numerous variables. How do you determine which variables are most significant for your analysis?

53. Imagine you are tasked with analyzing sales data, and you notice a significant drop in one region. What steps would you take to investigate the issue?

54. You have to present your analysis findings to a diverse audience, some of whom have no technical background. How would you ensure that your presentation is clear and engaging?

55. If you were given a dataset with conflicting information, how would you determine which data to trust?

56. You need to develop a new reporting dashboard with tight deadlines. How would you prioritize features and manage your time?

57. Consider a scenario where your analysis leads to a recommendation that is unpopular among team members. How would you handle this situation?

58. You discover an error in the data after completing your analysis. What steps would you take to address the error and communicate it to your team?