# 74 Numerical Reasoning interview questions to ask your applicants

## Questions

1. A company has revenue of $1.2 million and expenses of $900,000. What is their profit margin as a percentage?

2. If a train leaves the station at 2 PM traveling at 60 miles per hour, how far will it have traveled by 4 PM?

3. If a recipe calls for 2 cups of flour and serves 4 people, how much flour is needed to serve 10 people?

4. A car's fuel efficiency is 30 miles per gallon. How many gallons are needed to drive 180 miles?

5. A factory produces 150 toys every hour. How many toys will it produce in a 7-hour shift?

6. If the total cost of 5 notebooks is $15, what is the cost of one notebook?

7. A company's revenue increased from $500,000 to $750,000 in one year. What is the percentage increase?

8. If you have a dataset with 120 entries and you want to split it into four equal groups, how many entries will each group have?

9. A business spends $250,000 on salaries, $100,000 on office rent, and $50,000 on utilities annually. What percentage of the total annual expenses is spent on office rent?

10. If you save $200 per month, how much will you have saved after 18 months?

11. A company has 1,000 shares outstanding and decides to issue 500 more shares. What is the percentage increase in the number of shares?

12. You buy 3 items for $15 each and 2 items for $20 each. What is the total cost?

13. If a project takes 6 people 10 days to complete, how long would it take 8 people to complete the same project?

14. If a machine produces 100 units in 4 hours, how many units will it produce in 6 days if it runs for 20 hours each day?

15. A company's profit increased from $2 million to $2.5 million. What's the percentage increase to two decimal places?

16. If a team of 5 analysts can process 1000 data points in 2 hours, how many analysts are needed to process 3000 data points in 3 hours?

17. If a dataset has a mean of 50 and a standard deviation of 10, what percentage of data points fall within one standard deviation of the mean?

18. A company's employee satisfaction score improved from 3.8 to 4.2 on a 5-point scale. What's the percentage improvement?

19. How would you approach analyzing a dataset with significant outliers that could skew the results?

20. Explain how you would calculate and interpret the Coefficient of Variation (CV) for a dataset.

21. How would you determine if there's a statistically significant difference between two groups in your data?

22. Describe how you would use regression analysis to forecast future sales based on historical data and multiple variables.

23. How would you design and analyze an A/B test to measure the impact of a new feature on user engagement?

24. Explain how you would use time series analysis to identify and forecast seasonal trends in our business data.

25. You're given a dataset showing monthly sales for the past year. How would you identify any seasonal trends?

26. A scatter plot shows a positive correlation between marketing spend and revenue. What does this suggest, and how would you quantify the relationship?

27. You have customer satisfaction scores from 1-10. The mean is 7.5, and the median is 8. What might this tell you about the distribution of scores?

28. You're presented with a box plot of employee salaries across departments. How would you interpret and explain the information it provides?

29. A line graph shows website traffic over the past month with a sudden spike on one day. How would you investigate the cause of this anomaly?

30. You have a histogram of customer ages. How would you use this to inform marketing strategy?

31. A heat map shows correlation coefficients between various product features and customer retention. How would you use this to prioritize product development?

32. You're given a funnel chart of the sales process. Where would you look to identify the biggest area for improvement?

33. A stacked bar chart shows revenue breakdown by product category over the last five years. How would you describe the overall trend and changes in product mix?

34. You have a dataset of customer complaints. How would you categorize and visualize this data to identify the most pressing issues?

35. A bubble chart shows three variables: market size, growth rate, and current market share for different regions. How would you use this to recommend expansion strategies?

36. You're presented with a Pareto chart of defects in a manufacturing process. How would you interpret this and what actions might you recommend?

37. A radar chart compares your product against competitors across six attributes. How would you use this to identify areas for improvement and marketing opportunities?

38. If a product's cost of goods sold is $30 and the selling price is $50, what is the gross profit margin as a percentage?

39. A business has a current ratio of 2:1. If its current liabilities total $100,000, what are its current assets?

40. If a company's total debt is $200,000 and its equity is $300,000, what is its debt-to-equity ratio?

41. A stock's price was $80 at the beginning of the year and is now $100. What is the percentage increase in the stock price?

42. If a firm's operating expenses total $250,000 and its net income is $150,000, what is the operating profit margin as a percentage?

43. A company's earnings before interest and taxes (EBIT) is $500,000, and interest expenses are $100,000. What is the interest coverage ratio?

44. If an investment of $10,000 grows to $12,000 over 3 years, what is the annual growth rate?

45. A business sells a product for $250 and has variable costs of $150 per unit. What is the contribution margin per unit?

46. You have monthly sales data for the past two years. How would you forecast sales for the next quarter?

47. If you notice discrepancies in a financial report, how would you identify the source of the errors and correct them?

48. Given a dataset with missing values, what techniques would you use to handle them and why?

49. Describe how you would analyze the impact of a marketing campaign on sales using numerical data.

50. If you have to choose between two investment opportunities, how would you compare their potential returns and risks?

51. A dataset shows a downward trend in customer satisfaction scores. How would you investigate the underlying causes?

52. Explain the steps you would take to evaluate the financial health of a company using its financial statements.

53. You are given sales data with seasonal variations. How would you adjust your analysis to account for seasonality?

54. A report shows a sudden drop in website traffic. What numerical methods would you use to pinpoint the issue?