

Mathematical Physicist Interview Questions

1. Name a time when your advice to management led to an improvement in your company or otherwise helped your employer.

2. What kind of experience do you have performing complex calculations as part of the analysis and evaluation of data, using computers?

3. Describe methods you have found effective to observe the structure and properties of matter, and the transformation and propagation of energy, using equipment such as masers, lasers, and telescopes, in order to explore and identify the basic principles governing these phenomena.

4. What factors do you consider when developing theories and laws on the basis of observation and experiments, and apply these theories and laws to problems in areas such as nuclear energy, optics, and aerospace technology?

5. Tell me about some of your most recent computer programming projects.

6. Provide an example of a time when you successfully organized a diverse group of people to accomplish a task.

7. Share an experience you had in dealing with a difficult person and how you handled the situation.

8. Tell me how you organize, plan, and prioritize your work.

9. What are some long-range objectives that you developed in your last job? What did you do to achieve them?

10. Give me an example of when you thought outside of the box. How did it help your employer?

11. Tell me about an experience in which you analyzed information and evaluated results to choose the best solution to a problem.

12. Would you consider analyzing data or information a strength? How so?

13. Share an example of a time you had to gather information from multiple sources. How did you determine

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which information was relevant?

14. Provide an example of a project you worked on that demonstrates your programming abilities. What was your role in the project?

15. Please share an experience in which you successfully taught a difficult principle or concept. How were you able to be successful?

16. Share an experience in which you used new training skills, ideas, or a method to adapt to a new situation or improve an ongoing one. (Look for the candidate's ability to learn.)

17. Share a time when you successfully used scientific rules or methods to solve a problem at work.

18. How would you rate your writing skills? (Ask for an example that demonstrates great writing skills.)

19. Provide an example of a time when you were able to demonstrate excellent listening skills. What was the situation and outcome?

20. Share an experience in which your attention to detail and thoroughness had an impact on your last company.

21. Share a time when you willingly took on additional responsibilities or challenges. How did you successfully meet all of the demands of these responsibilities? (Make sure the candidate is a self-starter and can demonstrate some initiative.)

22. Provide a time when you worked in a rapidly evolving workplace. How did you deal with the change? (Make sure the candidate is flexible.)

23. Tell me about a time when you developed your own way of doing things or were self-motivated to finish an important task.

24. Share an example of when you went above and beyond the "call of duty". (Look for answers that show the candidate is dependable.)

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25. Share an example of when you established and accomplished a goal that was personally challenging. What helped you succeed?

26. Tell me about the last time you directed testing and monitoring of contamination of radioactive equipment, and recording of personnel and plant area radiation exposure data.

27. Name a time when your creativity or alternative thinking solved a problem in your workplace.

28. Describe what factors you consider when analyzing data from research conducted to detect and measure physical phenomena?

29. How good are your writing skills when it comes to describing and expressing observations and conclusions in mathematical terms?

30. Tell me about the last time you monitored or reviewed information and detected a problem. How did you respond?