

Interviews - Handling Logic Questions

Do better puzzle solvers make better employees? Not necessarily, but let's look at some reasons why this, and a lot of similar questions, are very popular on interviews, and how you might approach them.

- *Imagine you have nine coins, one of which is slightly heavier than the other eight, but not perceptible by human touch. You need to locate the defective coin by taking only two measurements on a balancing scale. How would you do this?*

Believe it or not, this is a very popular question among big name technology companies, as well as for analytical roles in other industries.

If you don't know the answer, don't fret, but at the same time do not simply shrug your shoulders and come back with, "I don't know."



A surrender style response not only tells the interviewer that you cannot solve the problem; it tells her that you can't be bothered to try.

But what do you do if you are taken aback by the question and need a moment to compose your thoughts?

One tactic is to reply with some follow-on questions. "Is there a reason why we cannot weight each coin?" "If the difference in weight is so subtle that it is imperceptible by human touch, how certain are we that the scale is that precise?" There is nothing wrong with asking amplification questions; every employee has different skill sets and different experiences, and will identify with the problem differently, so asking reasonable and related questions tells the interviewer that you are starting to think through the process but need further clarification before attempting to solve the problem. It also shows that you are taking steps to get everyone on the same page before tackling the issue.

You've studied the job description inside out and did your homework on the hiring organization, thinking you're all prepared for your interview when all of a sudden the interviewer throws you a totally off-base logic puzzle that seems to have no relevance to the job. What do you do?

As you start to form your response, keep to a calculated thought process; it is easy to err on the side of guessing at what you think the interviewer wants to hear when under pressure during the interview, but guessing conveys an image that you might not be able to work in a detail-critical environment.

Logic questions are challenges with answers that can be rationally worked out; they do not have a trick implication to them.



Interviewers are not overly concerned that the candidate comes up with the correct answer; they are interested in the applicant's thought process because the successful candidate will most likely utilize a similar type of reasoning on the job.

And if you are still working through the logic for this sample question, let's look at the solution.

- *Pick six coins at random and place three on each side of the scale. If one side tilts lower, the defective coin is among those three. If both sides balance, the defective coin is among the three you did not yet weigh. You now narrowed the defect ratio from one in nine to one in three. Next, pick two coins at random from the set of three that contains the defective coin and weigh them against each other. Using the exact same logic as the first weighing, you can now isolate the defective coin. If one side tilts lower, that coin is the defective one; if both sides balance, the defective coin is the one you did not weigh.*

Now, how many marbles fit into a sixteen ounce jar...?

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