

Introduction

Congratulations on becoming the proud owner of the international version of the book »The Insider's Dossier: Brain teasers & puzzles in Job Interviews – 140 Interview Problems«. Whether you've bought this book as preparation for a job interview, or simply as an intellectual challenge, we'll introduce you to the most popular brain teasers used by some of the world's leading organizations.

This book aims to help you solve brain teasers successfully. But at the same time, it's more than just a guide for job hunters. With practice, you'll see that it can be great fun getting your head around tricky problems and training your mind to deal with all sorts of scenarios, whether or not you're attending a job interview in the near future.

The problems in this book are mainly those used by consulting companies, banks, companies from the consumer industry, as well as tech companies and business schools. Some have already been discussed within the framework of the online career network squeaker.net or nicube.com. Others have been researched from companies and job hunters and we've developed some suggestions for solutions ourselves.

Thanks to the online career networks squeaker.net and nicube.com, we're able to ensure that our book provides up-to-date examples and information about the sort of tests you'll be faced with at interview. The amount of information in the networks prove that brain teasers have become a regular part of interviews, and are more and more frequently becoming part of the standard procedure when it comes to banks, consulting and tech companies.

If you know more brain teasers, or alternative solutions, feel free to share and discuss them with us in the network: [à squeaker.net](http://squeaker.net).

We hope this book provides you with many hours of fun – and ultimately career success!

The squeaker.net editorial team

Note:

These types of brain teasers are used by international organizations throughout the world. Whilst most of them come from US companies, the same questions are asked in Germany, the UK, India, China, France, Australia, Dubai, South Africa, Spain, or wherever. Whilst details may vary, the main methods of reaching the solutions are the same. Due to the international nature of this book, we use metric measurements in the examples. In an interview in your home country, expect whichever measurements are usually used in your country to be used.

What is a brain teaser?

Brain teasers are logical problems which test your ability for analytical, autonomous and logical thinking. They're usually in the form of a short anecdote and encourage you to use your ability to solve problems in an unknown, unusual and possibly even totally unreal situation. In many ways, brain teasers are like mathematical problems that we all remember from school: you use your every-day knowledge and your logical ability to solve an abstract problem.

What's fun and intellectually challenging is the fact that, at first, brain teasers seem impossible to solve (or at least impossible to solve correctly), and yet all of them have a logical solution. Once you're set before a brain teaser, you just have to find out the answer!

Why do organizations use brain teasers?

Certain types of organizations regularly use brain teasers for job interviews. Watch your friends try and solve a brain teaser. In no time at all, you'll notice their individual ability and motivation and how differently each of them goes about solving the brain teaser. This is exactly what HR wants to do when using a brain teaser in an interview: they want to see how you deal with a tricky problem, and whether you can analyze it and deal with it in a structured manner.

At the same time, recruiters can determine how a candidate copes with the stress of a difficult, unusual situation, and how he or she expresses himself: i.e., not only is the candidate able to understand, structure and solve the problem, but can also explain it to others. Brain teasers also give the interviewer an idea of how the candidate copes when he or she doesn't immediately find a solution to the problem.

Brain teasers sometimes serve as an alternative to intelligence tests, allowing companies to test the mental ability of candidates. Whether or not they're really a suitable alternative is a bone of contention.

For organizations, however, brain teasers have the advantage of not only allowing them to test the candidate's general intelligence, but also of showing them whether this person is actually in a position to be able to solve and deal with real problems. What they're looking for is the basic ability to solve problems rather than the specific qualifications that may be required for the job.

Which organizations are likely to use brain teasers?

Brain teasers at the level we're looking at in this guide tend to be used for candidates with a university education. They're most often used for recruitment within the investment banks but are also frequently used by consulting companies. You can also expect brain teasers for any position involving autonomous, analytical skills: that may be in marketing, in the tech area or in logistics, as well as in controlling or finance. We've also heard of brain teasers sometimes being used by private universities and business schools, as well as some start-up companies.

Depending on what sort of a job you're applying for, companies may also require certain professional or subject-related qualifications without which you'd be unable to solve the problems they put before you. As a business or economics graduate, for example, you should be able to calculate turnover and profit. And if you're applying for a position in programming, then it's fair to assume that your employer will expect a greater depth of mathematical ability than for your average candidate.

But not all consulting companies and banks use brain teasers. Don't be disappointed if you don't get one at interview: they will rarely play a major role in the recruitment process. But, of course, if you're lucky enough to be given the opportunity to shine, then why not do it?

How do I best deal with brain teasers?

Candidates require a variety of skills to solve brain teasers. Companies want to test mathematical understanding, logical thinking, creativity and the ability to think out of the box. Most brain teasers can be solved without any specialist knowledge or expertise. It's rare for companies to be looking for mathematical formula or scientific laws. But no matter what the problem, it's possible to practice the right way to deal with these types of problems.

When using brain teasers, organizations are looking for candidates' ability to think in unusual ways. You'll very rarely be able to find the solution immediately, and watch out if you do, because it's probably wrong! Indeed, the more obvious the answer, the more likely it is to be wrong. Some sort of trick will nearly always be hidden in the text. That doesn't mean that you can't express the obvious answer in an interview: just don't forget to mention that you think it's probably not the correct one. Then go on and look at why the answer is wrong and start structuring the problem in hand.

Often, the candidate will get heaps of information in a brain teaser that's totally irrelevant. By the same token, the really relevant information may be hidden in a seemingly unimportant sentence or word. Sometimes, the difficulty of the brain teaser is the way we

unintentionally interpret information into a text which isn't even there because it just seems so obvious to us. Thus, the most important first step is to have a really good look (or listen) to the problem and check the content and relevance of every single word.

It's also not only important to read the text of the brain teaser very carefully, but also to continuously check every step. If you've solved a mathematical problem, then check it again to make sure that you've taken into account all the circumstances, and check whether your formula really was correct. And when you've done that, check that your correct answer does actually make sense, or whether there may be other physical restrictions which aren't mentioned in the text but implied, or simply to be expected in reality. For example, you'll see in one problem in this guide that whilst it's possible to make a dog run at the speed of light using mathematical formula, this isn't feasible in reality!

But don't get too disheartened if you don't really understand the brain teaser: the stories used are often pretty absurd. Don't get put off because reindeers suddenly start flying, but just accept it as a given. And remember that, whilst companies are certainly looking for creativity, you shouldn't let your imagination run wild by making assumptions that are not mentioned in the text, and you shouldn't start taking routes that are obviously not being asked for!

Make sure you look for solutions and not just for mistakes in the question! You will always be given all the information you need to solve the problem.

Many brain teasers seem impossible to solve at first. Candidates may well be put off by questions which don't make it clear whether there really is a solution to be found. Always assume, even with these questions, that there is an answer to the brain teaser. This is nearly always the case. If you really believe there is no solution, then make sure you can justify your case. Don't be put off by open questions: just try and solve them using the strategies that we set out for you in the following chapters.

If you can picture several solutions to a brain teaser then go for the simplest one first. Usually, the solutions aren't as complicated as you may imagine. Before you start with complicated mathematical calculations, check again whether there's not an easier solution. The interviewer will almost certainly prefer the easier answer.

Try and solve the brain teasers in this guide on your own, without looking at the answers: even if this seems impossible at first. The ability to stick at it and the determination to solve complex problems are important factors in solving brain teasers. Don't look at our answers until you've found a solution for yourself.

How do I solve a brain teaser in a job interview?

Whether or not you find the correct solution to a brain teaser won't count as much in a job interview as the way you deal with the problem. The interviewer wants to see whether you can go about things in a structured manner by thinking through complex problems without losing faith. Always remember the following tips and you're already half way to solving a seemingly impossible problem.

Listen to the instructions very carefully and don't hesitate to make notes. If there's something you're not sure about, make sure you clarify it straight away. Once you've understood the instructions properly, repeat the important points and watch the interviewer's reaction. Take a minute to think about it: nobody expects you to provide a correct answer after a few seconds! On the contrary, you should take time to consider a brain teaser carefully. Consider all influencing factors and ask intelligent questions. Show how you can proceed in a structured manner without jumping from one thought to the next. Organize the problem into sub-problems. Suggest hypothesis and test out whether these actually help solve the problem. Think ideas through to the end, and if they prove wrong, just start again using a different method.

The most important thing in the whole process is to express your thoughts and various steps in finding a solution in a comprehensible manner so that the interviewer understands exactly what you're thinking. It won't help you at all to go off on your own for ten minutes and then suddenly come back with the answer.

Look at the process of solving the brain teaser as a form of interaction between you and your interviewer. Watch your posture (no slouching!) and express yourself clearly. Don't let yourself get nervous. At the end, summarize your most important steps and present your solution clearly.

The Golden Rules

The ten most important rules for solving brain teasers in job interviews:

1. Never let yourself be defeated by the complexity of the problem. Remember that all brain teasers have a solution!
2. Sort out the important facts and try not to get distracted by trivial information.
3. If there's something you haven't understood, make sure to clarify it.
4. Look at the brain teaser analytically and don't forget to use your common sense.
5. Try and picture the problem in your mind.
6. Take the problem one step at a time, detailing your steps as you go, and making sure your interviewer is aware of each and every step.
7. If you can't find a way of solving the whole problem, try and work in small steps, checking your assumptions and creating hypotheses.
8. Nothing is worse than giving up too early. If your way of solving the problem isn't working, then try a new way.
9. Try and have fun solving brain teasers rather than seeing them as a test.
10. If you're given a brain teaser that you already know, ask to be given another.

In the following chapters, we've divided the brain teasers up into different categories depending on which skills they're testing, and which strategies are most useful to help you solve them successfully. It's impossible, however, to categorize them absolutely clearly as many brain teasers can be solved using different strategies. For example, whilst a lot of brain teasers can be solved using mathematical formula, they can also be solved with logical thinking and trial-and-error. Thinking out-of-the-box is something you'll need to be able to do for most brain teasers. At times, that will be the requirement for solving a brain teaser, but at other times you'll also be able to solve the problem simply by noticing the trick in the question.

After the categorized examples, you'll find more brain teasers which have not been categorized and which you should concentrate on working on yourself. You'll find the answers at the end of the book. Enjoy!