

McKinsey Problem Solving Test

Top Tips



McKinsey Problem Solving Test

You're probably reading this because you've been invited to take the McKinsey Problem Solving Test. Don't stress out – as part of the interview process, we ask most candidates to complete this test. We use this multiple choice test to better understand how you approach problem solving and how well you can size up a situation. McKinsey is more interested in *how you think* than in how much you've memorized. Here are a few important things you should know about the test:

- **This is not a math test.** Most work at McKinsey involves data, and data is a big part of the test. But only some of the questions involve math. There are also a lot of other questions that ask you to read and understand text, use logic, make inferences and draw conclusions – all part of a day's work for a McKinsey consultant.
- **This is real McKinsey work.** If you've been wondering what McKinsey consultants do, now is your chance to find out. Of course not all of our work is about problem solving, but a large part is. Everything in the test is based on real work that has been done by a McKinsey team.
- **You can't bring a calculator or anything else, just your natural abilities.** Although some questions might look like they need a calculator, they are actually written in a way that can be solved without one. For example, in some questions, by performing a quick estimate in your head or on paper, you can identify that only one of the responses is close to your estimate.
- **No business background is necessary.** We mean it! We've designed this test so that all you should need is inside it. Apart from your own brainpower of course.
- **Time is precious.** There are 26 questions to answer in an hour. We would be surprised if you manage to read, think, and answer them all in this time. Do what you can, and remember that there is no penalty for getting an answer wrong.

Practice tests

We want you to do the best you can, and we know that a lot of people like to practice before taking tests. So we've created some practice tests for you. These practice tests look just like the real test, so they'll give you an idea of what to expect.

We know that there are many different approaches to test taking, and different approaches suit different people. We've developed some Top Tips for how to approach this test.

Top Tips – Absorbing, Solving and Managing Time

Here are the biggest things you'll need to be prepared for when you take the test:

- **Absorbing.** You'll be presented with information in text and exhibits. Absorbing and understanding this information is critical to answering the questions in the test.
- **Solving.** You'll be asked questions and given four options to choose from in answering each question. Often, you won't have the time to check each option in detail. You'll need to be comfortable using judgment and shortcuts when you can.
- **Managing time.** Twenty-six questions in an hour means just a little over two minutes per question. But you'll also need time to absorb the information. You'll need a strategy to manage time well, so that you can do your best to answer as many questions as possible.

We've put together some more detailed tips for you on each of these. After you've read these tips, we've then illustrated them by showing you how they can be used in solving the first 10 questions in Practice Test A.

Absorbing

- **Read the questions before the text and exhibits.** Text and exhibits are followed by a set of questions. Read the questions and scan the responses in a section **before** reading the text and exhibits. As you read, circle the important words. This will allow you to read the text and exhibits with a purpose.
- **Speed-read the text.** As you read through the text quickly, circle or underline any information that you think is relevant to answering the questions. You do not have to read and understand every single word.
- **Pay close attention to exhibits.** Exhibits are likely to hold information needed to answer many of the test questions. When reading this type of information ensure you have noted the title, legend, labels of the axes, and the units for each item.

Solving

- **Structure your approach.** Before answering a question decide on your approach. You do not want to waste time working out things you do not need to, or simply churning data for no reason. Make sure you have truly understood what you need to work out and how you will do it before beginning to solve.
- **Approximate.** Often questions may seem to call for you to perform complicated calculations. Look closer! There will often be a shortcut that will allow you to save time and avoid tricky calculations. Often the shortcut involves rounding numbers to make them more manageable, or performing a rough estimate.

Top tips

- **Eliminate.** Your approach for many questions will be to eliminate incorrect responses in order to find the correct answer. By working out approximate answers as suggested above, you can rule out some responses quickly and increase the odds of a correct choice.

Managing Time

- **Keep calculations organized.** When you need to perform calculations during the test, keep your work for each question to a separate, well-marked area. This will keep your calculations organized, reducing the time you spend checking your work and searching for information you have already recorded/worked out.
- **Transfer answers in groups.** When you decide on the answer to a question, circle it or write it to the left of the answers on your test paper. Then, when you finish a set of questions transfer your answers to the answer sheet all at once. This will save you time going back and forth to the answer sheet.
- **Be disciplined.** Resist the temptation to spend a long time on any one question, and skip questions that immediately appear too difficult. Once you have completed other areas you can always return to earlier questions. You can also leave notes of your initial thoughts next to the question in order to remind yourself later when you return.
- **Ensure test completion.** It is very difficult to finish every question in the time given, so, when there is 15 minutes left in the test, pick up your pace. Alert yourself to the fact that you have limited time left, and endeavour to shade in an answer for every question. There is no penalty for wrong answers.

Try out our top tips

In the following pages we will illustrate how to apply the above techniques to some of the questions in Practice Test A. Make sure you have a copy of the practice test handy as you read the following pages.

For Questions 1-6 of the test, we will provide detailed guidance on how best to approach each question. For Questions 7-10, we will provide some guidance, though not as detailed as in Questions 1-6.

Once you have completed the 10 questions, try to complete the remainder of the practice test using similar techniques.

Ready to start? Just turn the page...

Question 1

Absorbing. In the question you should circle the words *reason for the teams work in preparing*. Then when you speed-read the text you are able to circle the words *In preparation*, which begin a sentence contained in the second paragraph. The key information needed to answer this question is in this sentence.

Question 2

Absorbing. Circle *Innovation Capital* and skim over the response options. You should immediately see that they refer to different types of spending by organizations. Then when you speed-read the text you are able to circle *three types of Innovation Capital* at the beginning of the third paragraph. The key information needed to answer this question is in this paragraph.

Question 3

Absorbing. Words to circle: *can be concluded* and *Exhibit 1*. Skim the responses to note that they refer to the three types of Innovation Capital. You will need to group the categories in Exhibit 1 into the three types of Innovation Capital using the paragraph you used to solve Question 2.

Solving. Approximate and Eliminate. For A, sum the last three categories to make 3.3. Note that 1.5 is a little less than half of this, so this looks promising – circle it. For B, sum the 2nd to 4th categories to make 8.3. This seems quite a bit more than half of 13.8, so you can cross this out. For C, 1.2 is 10% of 12, so it must be less than 10% of 13.8, so you can cross this out. Use a similar strategy to cross out D.

Question 4

Absorbing. There are many key words in this question: *Innovation Capital, Exhibit 1, 5% per year, MINIMUM* and *Human Capital, more than half, ten years*.

Solving. Approximate and Eliminate. This is a calculation – and it's not easy – but you can approximate. First you could estimate that 5% growth over 10 years totals 50% plus an extra margin for compounding, so say 60% total. So total Innovation Capital would grow by 60% to about \$22tn. Therefore, you are aiming to hit at least half of this, or around \$11tn. Remember from Question 3 that total Human Capital is \$3.3tn? Now you can look at each response option and use the same estimation method. For Option A, 10% growth over 10 years is 100% plus a bigger extra margin for compounding, say 150% total. So

Top tips

\$3.3tn in Human Capital would increase by 150% to about \$8tn – nowhere near \$11tn so you can cross this option out! For Option B – 15% growth over 10 years is 150% plus an even bigger compounding margin, say 250%. So \$3.3tn increasing by 250% is more than \$11tn. Circle this response.

Managing time. If this question looks really hard to you, why not skip it and come back later if you have time? If you give it a go, clearly mark the space you use for your calculation, so you don't get it muddled with other notes. Also, you might be tempted to perform the calculation for responses C and D to be absolutely sure, but is it worth the time?

Question 5

Absorbing. Circle: *if true, BEST, Exhibit 2, important*. Look at Exhibit 2 and note that most of the countries shadings are dominated by Productivity.

Solving. Remember that the over-arching topic here is Innovation. And Exhibit 2 is really about Productivity. What's the only response that mentions both of these? Circle it.

Question 6

Absorbing. Circle: *TRUE, Exhibit 2*. Scan the responses and note that they all refer to growth in Hours or in Productivity.

Solving. Decide your approach before launching in. How is growth in Hours or Productivity determined from Exhibit 2? By multiplying the overall growth on the top of the bars by the proportions inside the bars. Now you need to decide which option is true. Option A seems hard to verify so leave it for now; it also looks different from the other three. Looking at Option B, you can note that Slovenia has the highest overall growth, and is second only to Germany on the proportion of growth due to productivity. But Germany has very low overall growth, so this is enough to conclude that Slovenia has the highest growth due to Productivity. Circle it.

What next?

Try to complete questions 1-6 again, but try to employ the techniques above. Give yourself about 15 minutes to complete the first 6 questions.

Then answer questions 7-10 on your own using the techniques explained above. Give yourself 8-10 minutes for the 4 questions. When finished, compare how you approached these questions to the guidance on the next page.

Top tips

Question 7

Absorbing. Circle *Germany's, Spain's, growth due to Productivity*. Scan the responses and look how far apart they are from each other.

Solving. Decide an approach before launching in. Given the response options, do you need to use exact figures?

Managing time. Decide where to write your calculations and make sure it is not muddled with other notes.

Question 8

Absorbing. Circle: *LEAST, Slovenia, Czech Republic, Exhibit 2*. “LEAST” suggests that you will have to read all answer choices and then make a judgment.

Question 9

Absorbing. Circle: *LEAST, Innovation Capital, iPod*. Scan the responses. Is this similar to a previous question?

Question 10

Absorbing. What are the key words in this question and where can you find the most relevant information?

Solving. If you can't immediately identify the best response, consider eliminating.

How did you do?

We hope you found our Top Tips useful. You may want to try to use them to complete the rest of Practice Test A. Give yourself about 35-40 minutes to try the rest of the questions. Good luck!

