PennState

Interviewing with Consulting Firms

A Guide by
The Schreyer Consulting Group

Consultation on content provided by the Smeal Business Career Center

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Introduction to Case Interviewing

You've maybe met a few friends who plan on being a "consultant." What is a consultant, anyways? Well, **consulting** is simply a **problem-solving service offering**. Consulting can span industries and functions, but in its essence, you're being hired to solve a problem. If you're reading this, you're probably excited about the idea of being hired to help companies respond to new trends in a given industry, capture value from recent merger, or help make their workforces more productive.

In this guide, we've synthesized lessons we've learned from our time preparing for consulting interviews to bring you a short and effective tool to help you understand two things: what consulting is and how you can land "the offer" at one of the best consulting firms. You will find information on the recruiting process of companies, networking practices to get an interview, and finally, how to master the case interview. This is not to say that only reading this guide will be sufficient in accomplishing any of this. But, doing so will be an important first step in understanding this industry, and how to break into it.

For more tips, you should network with other students in your academic college, students in the consulting clubs on-campus (Nittany Consulting Group, Schreyer Consulting Group, Students Consulting for Nonprofit Organizations, or any other consulting-related organization), or consult your academic colleges. They will have a career office and advisors who will work with you individually on career development and the recruiting process.

You should know from the outset - broadly speaking, consulting is a competitive industry to break into. But don't fret - we've created a checklist at the conclusion of this guide detailing all the things you can do to make sure you're always one step ahead.

Who We Are

Before diving into the content, we think it's important to establish who we are. The three of us met through the Schreyer Consulting Group, and all interned at consulting firms after our junior year. While going through the recruiting process, we all benefited from the knowledge of upperclassmen that had landed internships and full-time jobs in the consulting industry. Much of this knowledge was not organized or available other than through conversations. In the past few years, Penn State students have been very successful at the top consulting firms. We decided to write this guide because we are passionate about continuing to create more consulting opportunities and resources for Penn State students.

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**Note: The views on case interviewing expressed in this book are the opinions of the student-authors after practicing for case interviews, and do not reflect the views of any professional services firm mentioned in this document.

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What is Consulting?

At its core, consulting is the business of providing professional advice. By definition, consulting is a **problem-solving service offering**. There are many different types of consultants - for the purpose of this guide, we will be focusing on business consultants.

So you might be wondering, why do consultants exist? Can't people or companies solve their own problems? These are great questions. The answer - no, people or companies can't always solve problems by themselves. And even if they can, it might be too tedious to do so internally. Sometimes an external firm - most often a consulting company - will have a better understanding of how to solve that problem. So, a company hires consultants to solve problems because it's either cheaper, better, or faster than if the company did so by itself. In this way, firms who hire consultants always expect a **return on investment**.

There are many different facets within business consulting. Just because we're calling it *business* consulting doesn't mean that only business majors can go into the field. Consulting firms hire a wide cross-section of majors (from engineering to liberal arts to education), and hire based off a candidate's demonstrated problem-solving ability as shown through their prior experiences and case interview. This is just a snapshot of what consulting is. To learn more, you should research more online, ask your friends and peers, and reach out to your academic colleges. The more you search, the more you'll come to understand just how many lives, businesses, and processes consultants touch. The following sections will now focus on the main purpose of this guide: to help you get interviews and perform well in them.

Firm Overview

Now that you have a brief understanding of consulting, let's talk about the different consulting firms that exist and recruit at Penn State.

There are several consulting firms you should know about. A group of firms colloquially known as the "Big 3" are *McKinsey & Company, Boston Consulting Group,* and *Bain & Company*. These firms recruit an extremely tiny, yet diverse, group of students with strong problem-solving skills and excellent intuition. Typically, these firms recruit from Ivy league institutions and top-ranked business schools, but recently, they've begun targeting Penn State students who are passionate about consulting.

Penn State students are very successful in being recruited by all of the "Big 4" consultancies. These firms include *Deloitte LLC, PricewaterhouseCoopers, KPMG*, and *EY*. Each of these firms differ in their feel, company culture, and services offerings. These firms are much larger, and have offices in virtually every major city in the U.S. and globally. They offer flexibility in recruiting - sometimes firms will recruit on-campus for several of their major U.S. offices. Additionally, these firms more often than not offer some form of **early recruiting**, where they come to campus to promote their firms and connect with underclassmen.

Figure 1. The "Big Three" Consulting Firms

Figure 2. The "Big Four" Consulting Firms

Other intermediary consultancies exist within the structure of Big Four firms, but operate differently. For example, EY acquired *Parthenon* strategy consultancy in a 2014 deal.[1] PwC acquired *Booz & Company* that same year, relabeling the group *Strategy&.*[2]

Firms such as *Accenture, IBM, Baker Tilly, RSM, and Grant Thornton* are considered to be middle market consulting firms. These companies service smaller clients and tend to not have as much of a strategy focus as the Big Three or Big Four. Penn State has strong relations with these firms and sends many students to these respective companies each year.

Other consulting firms will vary by specialty and industry. *A.T. Kearney, Oliver Wyman,* and *ZS Associates* specialize in operations, finance & banking, and healthcare respectively. Because of these firms' unique history and Penn State's lack of proximity to them, they don't typically recruit at Penn State. However, in the past year, we've had students accept full-time offers from all three of these firms.

There are, of course, many other consulting firms and some we haven't mentioned recruit at Penn State. The more you search outside career websites (LinkedIn, Indeed), Penn State's Nittany Lion Careers (internal career site), and talk with peers in the consulting industry, the more you'll come to understand the industry and its opportunities.

Recruiting Timeline

Recruiting starts whenever you want it to. The reality is this - as the labor market for top consulting talent increasingly strains, firms have to work harder to entice top talent. However, as these firms continue to do this, it becomes increasingly advantageous to engage with them as early as possible. As mentioned earlier, many of the firms have conferences for underclassmen to learn more about the company and to further develop leadership and problem-solving skills. Often times participants in these programs are very successful candidates when it comes time for full-time and internship recruiting. Repeated contact with a firm and its professionals (both its recruiters and consultants) helps to convey that a candidate is passionate about a career in consulting.

Firms will traditionally recruit during the fall of your junior year for internships, and during the fall of your senior year for full-time jobs. You can obtain a full-time consulting offer without having considered the profession your freshman or sophomore years. In this way, firms will consider the totality of your application - after all, they're looking for the best talent.

All told, there are dozens of firms that will hire you into a consultant-type role. If you're serious about getting a job in consulting, you should probably consider applying to at least five, but often, at least ten firms. The process for each firm is difficult and unique, but along the way,

1   Healy, B. (2014). Accounting Giant to Buy Parthenon . The Boston Globe. Retrieved from https://www.bostonglobe.com/business/2014/07/21/boston-consultancy-parthenon-group-acquired-ernst-young/ECKVANjyAhb-ztiIDOxm0DN/story.html.
2   Strategy&. (2019). Wikipedia. Retrieved from https://en.wikipedia.org/wiki/Strategy%26.

you'll learn where you fit in most and what kinds of work you enjoy the most. The next section discusses how to connect and network with firms.

Networking Best Practices

Several organizations at Penn State devote a lot of time teaching undergraduate students how to properly network. While there is no surefire way to network with employers, this section will touch on the big, overlying points of networking.

If we boil networking down to its essence, networking functions to reduce an organization's uncertainty about you as a candidate and further educate the firm about your background, history, interests, and personality. Moreover, networking provides *you*, the candidate, the opportunity to learn more about the firm you're applying to, and whether you're a proper fit. As a bonus, networking serves to provide an edge in the interview selection process for well-networked candidates.

Penn State students often excel at networking. Networking and leveraging your personal brand is a part of the culture at the University - whether through business fraternities, student organizations, or our rich alumni network. Students in all academic colleges should make efforts to network frequently with firms. Strong networkers will attend multiple sessions and distinguish themselves as the "best of their field," marketing themselves as attractive candidates with a diverse skill-set different from the "typical" consultant in their industry, yet still capable of learning quickly and performing well on the job.

And, we should note - students across the University are able to join Smeal student organizations if they would like to acquire professional development skills and network with peers. You're welcome to join these organizations if you are interested in learning more about consulting!

Now, let's take a look at how best to network with actual, real-life consultants.

Over the course of the many networking events you'll attend, you may find yourself often waiting in lines for just a 45 second to one minute "elevator pitch" to a recruiter or firm employee. You'll want to perfect this elevator pitch - who you are, what you study, **why you're interesting**, and **why you're a good fit for the firm**. To do this, you'll need to be prepared to distinguish yourself as a student whose interests align with the firm.

Preparing for an information session is as simple as Googling the firm and understanding its operations. You can find this information most often on the firm's website, where they'll provide case studies of work they've provided in the past. You may also consider looking for news articles about the firm. Equipped with this knowledge, you can confidently walk into a room and understand the type of work the firm conducts. Knowing this, you can ask the consultants you'll network with insightful questions that function twofold:

first, to provide you information that other applicants will not know (thus distinguishing you); and second, to impress the consultants you meet.

Distinguishing yourself is much more difficult. This often involves "telling the story" of your personal and professional career through your elevator pitch and subsequent conversations. The easiest way to distinguish yourself is to be your authentic self during the recruiting process. Be relaxed and confident and let your unique academic and professional interests come through as you talk with firms. This is not to say that one does need to prepare or polish their story. Practice goes a long way in how effective you are at communicating your unique story. Ask questions that are interesting and constantly find ways to contribute an intelligent "new perspective."

Third and finally, constantly demonstrating your fit is important when networking. Remember that every client interaction in consulting requires the consultant to build rapport, sell themselves, and sell their solutions. Accordingly, firms should expect nothing different from their potential candidates. When networking, you should be very cognizant of how you're pitching yourself to the firm. Here are three things you can do to demonstrate your fit.

1. Be an active participant in any conversation with a consultant.
2. Be flexible yet clear about your goals.
3. Treat the networking call as a conversation rather than a Q&A session.

In summary, in this section you've learned a **little bit** about a few of the consulting firms, the recruiting timelines, and networking practices. However, these few pages are just the tip of the iceberg. Seek out advice from personal mentors, clubs, organizations, career offices, and online resources to learn more. *Remember, the best networkers won't wait until the fall semester to network - start in the summer before the official recruiting cycle begins!*

Brief Note on Behavioral Interviews

Behavioral interviewing mirrors networking, and is the final criteria firms use to assess your personality, interests, and competencies outside of networking. But remember - networking supplements your interview, and the more a firm has learned about you through your networking, the more likely it is that you'll shine in the behavioral interview. We want to be clear - the purpose of this guide is **not** to prepare you for the behavioral interview, despite its importance. There are several other resources on-campus that can help you prepare for the behavioral interview - practicing with your friends, the career center, or most business-oriented student organizations. Seek out these resources, and prepare adequately for the behavioral interview to succeed.

Case Interviews Explained

Case interviewing for consulting firms can be intimidating. Many other applicants will likely be vying for your exact position as an incoming intern or analyst at any number of the top consulting firms in the country. If you have been selected for an interview, this means your competition has decreased to a much smaller pool of applicants. Most consulting firms will have first and second round interviews, meaning your competition will become narrower (and more talented) the further you find yourself in the recruiting process.

Receiving any type of interview in this industry is difficult on its own. By this point, you've likely done a lot of the things we mentioned earlier in the guide - networked with current employees of a firm, attended their on-campus events, and catered your resume based on their advice. Or perhaps you've were selected on account of your phenomenal resume. Regardless, you now face the most challenging part of the recruiting process - interviewing with senior members of a firm in an intimate environment, and impressing them with your experience, potential, and personality. With most firms, you have not just one, but two opportunities to make a positive impression - a case and behavioral interview.

Like we just mentioned, there are many resources available on campus to prepare for behavioral interviews. You have access to your peers, clubs, and career services on campus. Thus, for the purposes of this guide, we will mostly be focusing on how to tackle the case interview.

What is a Case Interview?

You may have just heard the term *case interview* for the first time, so you must be wondering what it is. Consulting firms, and increasingly many other companies, use a two-pronged approach to interviews - behavioral and case interviews. As mentioned earlier, there are thousands of resources dedicated to outlining how to ace behavioral interviews. However, there are much fewer resources properly explaining the dynamics of the case interview. So, let's shift our attention to what a case interview is.

A case interview, in the context of consulting, is a miniaturized business problem that you will solve alongside one or more interviewers. There are two types of cases: interviewer-led and interviewee-led cases. We will focus mostly on interviewer-led cases as most companies follow this format. Interviewee-led cases are covered in a later section. Firms choose to conduct case interviews to gain a deeper level understanding of a candidate's analytical thinking and interpersonal skills. You will spend approximately 25 minutes talking through an ambiguous business problem situation and recommend a solution to that problem by the end of the interview.

A case is broken down into three major segments: the introduction, the body, and the conclusion. The introduction is where you are introduced to the problem. The interviewer will spend 1-2 minutes reading you the facts of the case - i.e. the broad strokes of the business problem. You will spend approximately 2-3 minutes understanding the background of the situation, asking clarifying questions, and creating a "framework" to break down the complex situation into manageable portions you can attack piece-by-piece.

The body is where you'll spend around 20 minutes diving into the core issues of the case. You will be asked qualitative questions - where you can be asked to brainstorm ideas - and quantitative questions, where you can be asked to perform mathematical calculations. These

questions will slowly drive you towards a "solution" to the problem at hand.

Finally, you will spend 1-2 minutes delivering your recommendation in the formal "conclusion." This is essentially a summary of what you've discussed over the last 25 minutes, and what the next steps you'd take in order to solve this business problem in the best possible way.

Case Interview Etiquette

Now that you have a general idea of what a case interview is, let's dive deeper into the recognized and universal etiquette that you should adhere to before diving into how to solve a case.

A case interview is meant to simulate the real-life job situations that consultants face every day. For this reason, half the "battle," per say, in any case interview is just proving that you have the presence and demeanor to be in front of clients, partners, or team of associates. Here are a few tips to help you do just that:

- **Write legibly.** Throughout the interview, you'll be using pen and paper to jot notes, create frameworks, and record information. If you and/or the partner can barely read your handwriting - whether that be your notes, framework, or anything else - the client definitely won't be able to either. You should also bring plenty of pen or pencil and paper (graph or plain) to take notes. In addition, you should set up your paper in a structured manner to help yourself organize your notes. *See the appendix* for an example on how to structure your paper.

- **Make eye contact.** You'll be delivering your thoughts and analysis periodically. You don't have to be staring at the interviewer at all points throughout the interview, but make sure you are looking head-on and projecting confidence when you speak to your interviewer.

- **Engage with the interviewer.** Turn your paper around when presenting your ideas. This engages the interviewer and allows you to walk them through your logic to show them how you plan to attack the problem. Make sure your paper is neatly organized in different sections (i.e. a section for taking general notes, another for writing your ideas in a presentable manner, an area for the question, and etc.).

- **Be enthusiastic.** Showing that you enjoy being creative and solving difficult problems tells the interviewer that you'd be a strong potential team member.

Although there are many other small things you can do to stand out, these are just a few that will help you make a positive impression in the interview. Let's move on to how to actually go through a case interview, where you'll learn more tips and tricks.

Beginning of the Case

Let's dive into how to go about tackling each portion of the case interview!

When starting a case, there's a specific structure interviewees should follow. At the start of the case, the interviewer will begin reading you a case prompt. Think about this information as the facts of the case - i.e., the facts of the problem you're being asked to solve. Take down (concise) notes about the prompt as your interviewer reads it aloud, then summarize the key points of the prompt before asking clarifying questions. Do not attempt to write down every word of the prompt - only jot down the higher-level facts (e.g., "sales = 20% decline" instead of writing "the company experienced a decrease in sales of 20%"). After practicing a few cases, your ability to identify the key parts of the prompt should improve and you tend recognize pieces of information that may be valuable in later parts of the case interview.

Here's an example (we will be using the same prompt throughout):

> **Interviewer:** *Our client is a global consumer packaged goods company, called Grime Co., that makes paper products such as paper towels, cleaning products, and laundry care products. The company's CEO has set a sales target of $2B in 4 years while sales are currently at $1B. Our client would like you to develop a strategy to deliver this growth.* [3]
>
> **Interviewee:** *So just to summarize, our client is a packaged goods company, and they want us to develop a strategy to double their sales in 4 years. Are there any other goals I should be aware of, such as overall profitability?*

Notice a couple of things. First, the interviewee did not repeat back all of the information. Second, the interviewee asked if there are any other objectives.

Once the prompt has been read, you want to confirm that you are not missing any critical information. You do not need to read back all the information. The goal is to make sure you have all the necessary information to move forward in the case. In addition, there are times when the prompt will be a lot longer than the one shown above, and you may not have enough time to write everything down. It is important here to do two things:

1. Try to write down information you think is most important while the interviewer is speaking.
2. If you feel that you are unable to keep pace while the interviewer is reading the prompt, ask them to repeat back the information you think you missed after they're done reading the prompt.

The second thing the interviewee in the example did was that he/she asked if there were any other objectives (a form of a clarifying question). Most times when you ask this question, the response will immediately be a no. But sometimes, asking about other goals could be the difference between getting important information and spending half the case looking for the right information in the wrong place.

Other clarifying questions you can ask can relate to the company being discussed in the case (i.e. product lines, employees, region of operation), its customers and competitors,

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3   Household Cleaner's Growth. (2010). The University of Michigan Ross School of Business MBA Consulting Club. PDF File.

or regarding the prompt itself (i.e. if there is a business term you don't understand, it's **encouraged** to ask about it rather than make an *uneducated* guess). Make sure that the questions you are asking are high-level questions that demonstrate your deep problem-solving skills. These questions are **not** meant for you to immediately find ways to fix the issue, which is why if you start asking questions that are too specific, the interviewer will not give you that information until later.

The biggest piece of advice we can offer for this section is this: it is okay to ask questions! No one expects you to be an expert on the issue being presented. Asking questions shows that even in uncertain situations, you are willing to learn. This is the first step in becoming a successful interviewee **and** consultant.

Structuring Case Interviews

Now that you know what the problem is, it is time to break it down. How you handle this key step can help you standout from other candidates. The first question of the case will typically prompt the candidate to **structure** the problem presented before them. This is usually asked in this type of phrasing: "*What are the key factors you would consider when…*" The presence of the word **factors** is often a signal that the interviewer is testing a candidate's ability to structure, break down, and prioritize a business problem into its component parts.

You should ask to take some time to think about this and simultaneously ask the interviewer, "Do you mind if I take a moment to structure my thoughts?" before answering the question. To answer the question, you'll take some time on your own to create a framework. **Frameworks** are characterized by visual free-body diagrams you will create as you hear the prompt and progress through the case. You should give yourself between 1-1.5 minutes to make your framework, then spend about 2 minutes delivering your answer to the interviewer. It is normal to take that time to write down your notes quietly (silence is not awkward!).

Let's take a look at an example of how to answer a framework-based question off of the prompt mentioned above (sometimes the interviewer asks the question while delivering the prompt - in this situation, follow the same steps we've discussed above).

> **Interviewer:** *What factors would you consider in helping Grime Co. attain their goal?*
>
> **Interviewee:** *Can I take some time to jot down my ideas?*
>
> **Interviewer:** *Go ahead.*
>
> *Take one to two minutes to structure the case. The structure for this example's answer can be found below.
>
> **Interviewee:** *There are three factors I'd like to consider. In order of importance, they are (1) Grime Co.'s capabilities, (2) market outlook, and (3) risks. I would like to dive deeper into Grime Co. capabilities first because I believe this will help me understand the background of the business. It can be broken down into segmentation of current product lines and new product investments. I'd like to look at those to see which product lines contribute the greatest to revenue and where our company should focus its resources. Next, I'd like to look at the overall market. I'd like to understand how the market is growing and identify whether there are growth opportunities available through M&A. Finally, I'd like to look at some intangibles, including risks associated with our strategy. I'd also consider the cultural impact of our strategy and whether any technological risks are impeding our growth.*

Figure 3. Example of advanced framework

This is an example of a more advanced framework; however, any strong framework will accomplish two objectives. First, it will show the interviewer that you have strong critical thinking skills; and second, it will help you complete the rest of the case by providing a framework for your analysis. When thinking about how you would like to break the case down, we have two recommendations of our own.

First, keep the framework *intuitive*. This means that you should identify factors that will **directly** help you break down and solve the problem - and more than that, it should make *complete logical sense*. In the example above, the interviewee picks three factors to break down the problem into portions that will directly help him/her answer the larger question: how the company can continue to grow its sales. It likely does not make sense to apply a value chain framework to this growth case - value chains are most applicable to operational efficiency problems. For those of you who are wondering what a value chain is, it is simply the sequential steps taken to transform raw materials into outputs - hence, they're most often applied to business situations that demand *efficiency*.

Keeping the framework intuitive also means keeping it M.E.C.E. M.E.C.E. is an acronym that stands for "mutually exclusive, completely exhaustive." This picture will help you understand what we mean by M.E.C.E.

To summarize, each factor you choose to break down the problem is separate from one another, and also, there are enough factors to help address the entire problem. The notion of M.E.C.E. is very idealistic. It is very hard to create a framework within 1-1.5 minutes that

Figure 4. The concept of M.E.C.E.[1]

will be able to address every issue the company faces, without overlapping with any other considerations. However, with enough practice, you will be able to create frameworks that are as close to M.E.C.E. as possible.
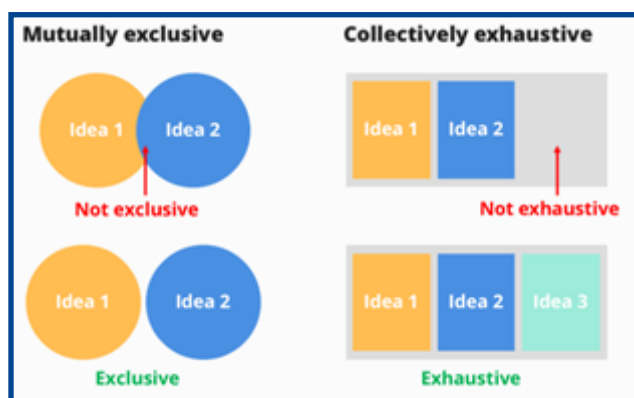
Second, do not apply a "cookie-cutter" framework to a given case type. For example, though the 4-P framework (product, place, price, and promotion) or Porter's Five Forces are widely recognized ways to think about growth opportunities, but applying them directly to a case interview shows the interviewer that you are not thinking critically about the problem in front of you - you're just reciting what you've memorized. The value in these popular frameworks is to allow you to have questions and ideas for thinking about certain types of business problems before the case interview. It is your job during the first moments of the case to determine which questions, analyses, segmentations are most appropriate.

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1   https://igotanoffer.com/blogs/mckinsey-case-interview-blog/mece

Note: Don't worry if you don't know frameworks such as 4Ps or Porter's 5 Forces. They are not imperative in ensuring that you perform well during a case interview or any other situation. The best frameworks are those unique to each problem. However, it doesn't hurt to know a few frameworks that will help with categorizing and analyzing common business problems. They will aid your creativity in crafting your own solutions to case problems. See the Appendix for a few examples of frameworks.

Once you've developed your framework, there is a specific way that you should deliver it. Your delivery should follow the *top-down* approach. *Top-down* communication dictates summarizing high-level ideas, and then delving deeper into those buckets of ideas. Or, in the context of our case, the top would be your first "buckets" in the structure, and the "bottom" would be the questions that arise from those buckets. In addition, you want to give the best and most important ideas first. This shows the interviewer that you are prioritizing ideas and problems - a skill highly valued on consulting teams.

The interviewee did a perfect job with this approach when he/she communicated the areas they wanted to explore and then expanding upon them once they had covered all the high level buckets. This delivery method is one of the most important communication techniques, as it demonstrates your ability to interact with the client professionally and efficiently.

Finally, you should always give a rationale for why you want to dive deeper into specific aspects. This is known as being *hypothesis-driven* in your communication. We cover this notion in the **For the Advanced Case Interviewer** section. However, for now, all you need to know is that you should be deliberate and reasonable in crafting your plan, requesting additional information, and presenting that plan to your interviewer.

Middle of Case

Now that you have successfully created a framework to simplify the problem, you'll now spend the majority of the time trying to find specific ways to achieve the goals stated in the prompt. In this portion of the case, there are two types of questions the interviewer will ask you: qualitative questions and quantitative questions. Qualitative questions demand you to generate ideas, and can also be referred to as brainstorming questions. Quantitative questions consist of basic algebra and mental math you'll need to perform quickly and on-the-spot.

Brainstorming Questions

Brainstorming questions offer an opportunity for you to display your business acumen and creativity. The best way to prepare for these questions is to read the business section of any major newsource and practice case interviews. It is helpful to have some ideas of how to cut costs, how to win customers, etc. Be careful to make sure that these are specific to the case. This type of knowledge is not developed overnight, and for underclassmen reading this guide, some of the best advice we received ourselves was to read the news everyday. Feel free to mention current market trends (often found in the news) that may be driving your thinking during these types of questions.

Don't forget to take time at the beginning of this question (as with every question) to collect your thoughts. In fact, write down each idea you have during this time. This is to your benefit so you do not repeat ideas when answering. All of your ideas are not created equal; give your best ideas up front and concisely describe your logic and reasoning behind them (*top-down approach*).

Let's run through an example to get a better understanding of how these questions are framed and how you can answer them.

> **Interviewer:** *Identify ways that our client can increase sales through internal changes within the next four years.*
>
> **Interviewee:** *Can I take a moment to collect my ideas?*
>
> **Interviewer:** *Sure.*
>
> **Interviewee:** *After about 45 seconds*
> *There are a couple of ways to increase sales through internal changes:*
> *1.   First, conduct R&D to invest in products such as tissues or bathroom cleaning supplies that we don't currently sell;*
> *2.   Second, strategically sell products in regions with high demand for paper or cleaning products, which would mostly be in the developing and developed countries;*
> *3.   Third, advertise our products more aggressively if we there is a lack of brand recognition with our company;*
> *4.   Fourth, optimize pricing to sell more volume/increase sales through competitor pricing analysis.*

There are two important rules you must follow while answering a brainstorming question: identify **tangible** ways to achieve the goals and follow the **top-down approach** to deliver the answer. It is important to understand that it will take practice to be able to do this well in such a short time frame, but it can be done.

The interviewee did a couple of things correctly. First, he/she catered the solution directly to Grime Co. and then answered in a *top-down* manner. Notice that although "conducting R&D" is not unique in itself, the interviewee made sure to talk about doing so for Grime Co. specifically and gave examples of what to invest in. This is enough to make a generic answer such as R&D to a unique answer applicable to the problem you're attempting to solve. The interviewee also answered using the *top-down approach*. He/she gave, what they thought was the best answer first and then moved to the least effective way to increase sales.

By following these simple steps of contextualizing the answer to the problem at hand and the *top-down approach*, you'll be able to make a brainstorming question much less intimidating. However, sometimes you will lack the time to properly conceptualize a solution. The point of not giving you any time to think - from an interviewer's perspective - is to stress-test you, and make you think on your feet. Thus, it is important to not get frazzled, stay composed, and rely on your business acumen. By remaining calm - and understanding the interviewer's motives - you'll be able to demonstrate that even under pressure, you can think critically and present yourself intelligently.

> **Tip:** Treat a brainstorming question as a framework question. Try to structure your response with broader levels and then diving deeper into each of them.

Note: For underclassmen reading this, the best way to get better at brainstorming questions is to do a couple of things. First, read the Wall Street Journal, New York Times, or any other news outlet. Second, join professional development clubs on campus that will help you gain business knowledge (i.e. business fraternity, consulting clubs, investment associations, research labs, etc.). You absolutely **do not** need to be a business major to do well in these types of questions. But by following those two simple steps, you'll be able to combine business acumen with your problem-solving skills to answer these questions well.

Case Interview Math

Case interviews will almost certainly include a quantitative question (sometimes two!), and it is important to have practiced case interview math beforehand. Typically, the math in case interviews remains synonymous across firms, so practice really helps you, no matter who you're interviewing with. Let's first begin by outlining the level of math ability expected from you. Case interview math is not designed to test your understanding of Calculus. Instead, interviewers use quantitative questions to test three skills:

1. Your ability to work with large numbers;
2. Your ability to structure analysis;
3. Your attention to detail.

The most complex case math will be a two variable system of equations (remember Algebra II). Numbers may often be in the thousands, millions, or billions. You must make sure to answer the question you are asked. Often times it is easy to put your head down with the analysis and think an intermediate calculation is the ultimate answer - so, attention to detail is an absolute must.

> **Tip**: Writing down the question at the top of your page is a great reminder to both you and the interviewer of the question at hand.

Most candidates will be able to get through these quantitative problems; how you get through these problems, though, is often the differentiating factor. Starting out, it is appropriate to take a minute to collect your thoughts. During this time, you should have one objective: to set up the algebraic equations (actually write these equations down on your paper) necessary to solve the problem. Once you have this set up, communicate in plain language to the interviewer your process for finding the desired answer. This demonstrates that you are able to competently communicate analyses and offers the interviewer a chance to jump in and correct you if you are off track. Once again, let's look at an example from the GrimeCo prompt above.

Interviewer: *The client has a new toilet cleaning product in development that analysts believe will do well. Price will be $5 a unit, but requires 20% trade spend per product to reach our target volume. We expect to sell 40 million units on average per year. If our client launches this product, how much additional growth do we still need to achieve to hit our target?*

Interviewee: *What does trade spend mean?*

Interviewer: *Trade spend is an additional cost incurred by the company to shelve the products in retail stores.*

Interviewee: *Ok, can I take a moment to gather my thoughts?*

Interviewer: *Sure.*

Interviewee: *After 30-45 seconds*
So how I plan on attacking this is by first identifying our actual price after trade spend and then multiplying it by the average number of units we plan on selling. Does that sound good to you?

Interviewer: *Yes, it does.*

Interviewee: *Taking 20% of the actual price, you get $1 in trade spend. Hence our overall "profit" will be $4/unit. Then, multiplying $4/unit by 40 million units will mean that we will generate an additional $160M in sales per year. This means that we still need $1B minus $160M = $840M increase in sales from other avenues.*

Price: $5/unit
Trade Spend: 20%
Volume: 40 million/year

Adjusted Price: Price – Trade Spend
$5 – ($5 * 20%) = $4/unit

⬇

Sales: Actual Price * Volume
$4 * 40 million = $160M/year

There are three things the interviewee did well here: first, the interviewee asked a clarifying question when they were uncertain of a specific term; second, they laid out the approach they were going to take; and third, they framed the answer in the overall context of the case.
As mentioned earlier, it is okay to ask questions when you're unsure about what something means. It shows the interviewer that you are not pretending to know everything and are willing to learn as you go along.

It is important to note how the interviewee laid out an approach they were planning on taking to solve the problem before crunching the numbers. By verbalizing this beforehand, it allows the interviewer to follow the steps you are going to be taking and correct you before you can make a mistake. This is extremely important because it demonstrates your ability to interact in a client-friendly manner - putting the process forward before implementing it. More importantly, if you make a mistake, it allows the interviewer to see that you are coachable and can adapt.

Finally, these quantitative problems are more than just math problems. The interviewers certainly ask for the numerical answer - but they are looking for you, the interviewee, to

interpret what that number means in the context of the case, the client's business, and/or the market. Recognizing the business context demonstrates your ability to see the larger picture. In this situation, the interviewee realizes that although you can increase sales by $160M, you still need to find a way to increase the revenue to $1B elsewhere. And that's critical to finding a solution to this client's original goal. By following these steps, you'll quickly come to master case math. If you're not comfortable with mental math, try practicing in your daily life. For example, multiply the first two numbers by the last two numbers on a license plate. There is also an app called Case Math that will help you get quicker with mental math. No matter how you plan on practicing, just remember - it's definitely worth practicing these problems a few times.

Navigating Between Questions

Finally, there's more to a good case interview than just brainstorming and math tests. Getting into the "flow" of the case can help your interview feel more relaxed and conversational while demonstrating your problem-solving skills. Here are some ways you can accomplish these goals:

- **Use your framework.** Your framework (if structured well) should serve as your map for navigating the case. If you ever feel lost or aren't sure where to explore next, refer to your initial buckets.
- **Tell a story.** With each question, you'll be given more and more background information about the problem you're solving. Use that info to target important areas and paint a better picture of why a specific number matters and what to do about it.
- **Listen to verbal clues.** When thinking about a topic, you may be tempted to make decisions based on your own knowledge. Make sure you're following where the interviewer is telling you to go; often, they'll give you subtle nudges in the right direction.

Your ability to do all three of these will help you master the basics. Remember, the case interview is not only testing your analytical ability, but also your interpersonal skills. Showing that you are able to trust your instincts by referring to your framework, contextualize the scenario by crafting a story, and remain coachable by picking up subtle hints will allow you to demonstrate your client-friendly skills.

Ending the Case

The past 25 minutes of your interview were designed to lead to this moment. You are almost done, and the last step is to make a recommendation. Almost without fail, the final question or scenario of the case will be a variation of the following question:

> **Interviewer:** *The CEO of the consumer packaged goods company has just walked in and has asked for an update. Can you summarize what we discussed today and make a recommendation?*
>
> **Interviewee:** *Based off of our discussion today, we should be able to reach the target of $2B in four years. We'll be able to do so by investing in R&D internally and acquiring another company to expand our international presence. However, there are risks associated specifically with the acquisition, such as cultural risks and realizing synergies. Hence, our next steps should be to continue significant due diligence to ensure that the target is the right fit for our client's company.*

In this situation, you do not have too much time to think. Thus, take a couple seconds to gather your thoughts and structure your response. There are 4 steps this interviewee followed to have a strong, concise response.

- **Make the recommendation:** In a client scenario, the client wants to hear the solution first, and that is exactly what you should start with. Throughout the case, you will naturally come to a conclusion about what the solution of the problem is and this is what you want to state initially. Simply put, the first sentence of a good conclusion will answer the question(s) that was asked of you at the beginning of the case.
- **Defend the recommendation with key findings:** The next step, logically, is to corroborate your solution with reasons you've established throughout the case. You should have two or three reasons explaining why you think the solution you're proposing is the right one - and, better than any other alternatives.
- **Analyze the risks & barriers:** Every solution has some risks associated with it. By showing that you understand these risks, you're establishing a higher level of thinking that will separate you from other candidates.
- **Mitigate and conclude with next steps:** You never want to leave the client with a negative thought. Hence, you must identify how to mitigate the risk. In addition, these mitigations can actually be action items. After making the recommendation, you must briefly explain what the next steps are to make this plan actionable.

Overall, the conclusion should take approximately 45 seconds to 1 minute. This framework will allow you to coherently and concisely summarize the case while leaving a lasting impression on the interviewer.

Now that you've ended the case, you can sit back and relax! If you did an interview for an internship or full-time, **don't** ask for feedback on how you just performed. Simply have an ordinary, non-case-related conversation, and ask your interviewer smart questions. If you were doing a practice case, refer to our later section on how to make sure you are improving with every case that you do!

Advanced Case Interviewing Skills

Now that you are familiar with the flow of a case interview, this section will help take you to the next level. Mastering the basics is not enough to get the offer - though it may sometimes be enough to move past the first round of interviews. You need to continuously demonstrate higher-level thinking in order to succeed.

The topics covered in this section include administering practice cases, interviewee-led cases and drawing advanced insights in brainstorming questions and charts/graphs.

Administering Practice Cases

Administering cases to your friends, peers, or at a career office is a great low-pressure way to practice and improve your case interviewing skills. However, for your skills to improve, you need to be able to trust the credibility of your interviewer and the criticisms they provide. Here are some tips to guide your practice sessions and make sure you are constantly improving.

When you are sitting on the other side of the table giving a case to someone else, it's easy to relax a bit too much - after all, you're not the one being interviewed. Here are some tips to help you enjoy the case, be more engaged, and give better feedback by being an *active interviewer*.

- **Know the type of case you're giving.** In an interviewer-led case, the format is much more Q&A based. In an interviewee-led case (you will learn about these in the next section), allow the interviewee to speak more and be more conversational. **Make sure you've read the case thoroughly before giving it to your peers.**

- **Make it realistic.** The objective is to simulate an environment as close to a real case interview as possible. Acting too relaxed, texting during the case, or doing anything else visibly distracting for the interviewee will keep them from getting into "the zone" and seeing real improvements in their performance.

- **Don't go easy on them.** You can throw the interviewee a few hints if they are struggling, but make them ask pointed, relevant questions before giving up important background information. Don't be afraid to stress-test the interviewee.

- **Keep a separate tab open on your computer to write down your feedback.** Taking notes makes it easier to know exactly what your criticisms were and put them in context.

- **Don't break from the case.** Many times interviewees will ask to break from the case interview format or environment to ask a question. While this okay once or twice for people just beginning to practice, the biggest improvement often derives from the pressure of the interview process - and completing your first live case.

Finally, in order to administer a case, you need to have access to one. You can find case interviews online, by googling them, or downloading casebooks that have already been created by the top MBA schools. Don't worry, these cases will have answers you can refer to to ensure that your interviewee is on the right track.

Providing Constructive Feedback

Giving feedback at the end of the case is one of the hardest components of practicing - especially when you feel less advanced than the person you are interviewing. However, it really is the most important part of this process. Feedback ensures that you are constantly learning and improving from case to case, rather than making the same mistakes over and over again.

To start, *make sure you congratulate* the interviewer on finishing the case! Doing practice cases isn't always fun or easy, so this is essential to make sure the interviewer is calm and relaxed when receiving your honest - and perhaps critical - feedback. You can also ask them to self-assess their performance - this will show you which parts of your critique you need to focus on more, and which parts they are already working (or know) to improve. **Last but not least, make sure they are taking notes on your feedback - otherwise, we guarantee they won't remember it.**

The first level of critiques should center on the interviewee's demeanor and client-readiness when delivering their answers. Keep an eye out for things like eye contact, volume and tone of voice, appropriate word choice, and confidence when assessing the delivery of an answer. These things may not seem like a big deal, but can go a long way towards making a good impression and convincing the interviewer you can handle yourself well.

The second level of critiques should be focused on the content of each answer. Use this area to correct inefficient or inaccurate frameworks, show the interviewer how they misinterpreted one of the questions, or suggest another way of approaching a question in the case. Make your criticisms as specific as possible and use examples to demonstrate your point - often people will forget what their answers actually were. An interviewee will greatly benefit from a refresher on how they answered or structured their response to a question. Use your notes from during the case to remind them exactly what they said, why it could be improved, and how you think they should have done it.

Following these steps will ensure that you are assessing the interviewee holistically. You are covering the soft skills by critiquing their delivery and their hard skills by giving feedback on their content.

**Note: Practicing case interviews is very similar to practicing a sport. After getting a feel for the flow and structure of case interviews in your first few cases, you should make a list of the skills that you want to improve on and share this with your interview buddy when they give you a practice case. As you continue to practice, continually update and refine the list of skills (pick the 3-5 most important at the time) after each case. With more repetitions, your skills are more likely to improve.

Example Rubrics:

Here are a few rubrics to help guide your (self-) assessment at the end of a case. For your convenience, we've included a separate grading system for each type of question you are likely to encounter in your case interviews.

<u>Structuring Question</u>

There is no right way to answer a question - especially a structuring question. Refer to the example case to see what factors they recommended including. Some examples of relevant factors include:

- The costs of entering the market
- The revenues from entering the market
- The capabilities of the company
- The value proposition of the client's products
- The risks of entering the market

If you had 90% or more of the "relevant" factors for your case and your answer was delivered well, you scored a '3.'

If you had between 66% and 90% of the relevant factors, you scored a 2.

If you had between 50% and 66% of the relevant factors, you scored a 1.

If you didn't reach 50% of the relevant factors, you scored a 0.

<u>Quantitative</u>

These questions are more objective and therefore much easier to grade. Assuming that you can earn a maximum of 3 points on each question:

If you solved the math correctly, add 1 point.

If you correctly described the significance of that answer to the rest of the case, add 1 point.

If your answer was delivered well, add 1 point.

<u>Brainstorming Question</u>

Unlike quantitative questions, these questions are subjective and there may not be specific "right" answers. We recommend following the same grading process as with structuring questions (see above).

<u>Overall Case</u>

Using the grading scales above, calculate your overall performance on the case. Generally, scores of at least 85% constitute a "passing" grade - this is a very strong performance and is where you should strive to be. Scores between 70% and 85% can be considered a "passable" grade. This means that your case interview performance alone won't get you the offer, but gives you a chance if paired with a strong behavioral interview and compelling prior experience. Scores below 70% will most likely remove you from consideration barring special circumstances.

While the grading methods outlined above are open to interpretation, they provide a solid baseline of how interviewers are likely to gauge your performance and make hiring decisions based on that information.

Interviewee-Led Cases

Everything we covered in the last section follows the format of an interviewer-led case. These cases are exactly what they sound like - the interviewer asks you questions and you answer them. This happens - in a back-and-forth, conversational manner - until the end of the case. An interviewee-led case is the opposite. Once you have gone through the *beginning of the case* and completed your framework, **you** are going to direct the case where you think you need to go in order to find the solution for the issue presented. You will use your framework to get different pieces of data that will help you create the final recommendation.

Some people can find this more difficult because it requires you to have a greater level of business acumen than an interviewer-led case would. To be successful in an interviewee-led case, you must employ *hypothesis-driven thinking*. This type of approach refers to how you should go about explaining your thought process and gathering information to reach a conclusion at the end of the case.

Let's look at an example of an interaction between an interviewer and an interviewee in a**n interviewee-led case** to better understand *hypothesis-driven thinking*.

> **Interviewer:** *Our client is VitaminCo, a producer of vitamin pills. They sell their products to health stores and pharmacies, and are now considering entering into the health foods and beverages market. They want to know whether this is a good idea and what to do.*[4]
>
> **Interviewee:** *To make sure I have all the right information, our client is a vitamin pill producer looking to enter the health foods/beverages market. They've approached us to identify whether this is a good opportunity. Are there any key objectives, such as increasing revenues or profits?*
>
> **Interviewer:** *Not at the moment.*
>
> **Interviewee:** *Ok, can I take a moment to write down my thoughts?*
>
> **Interviewer:** *Sure.*
>
> *After 1 minute passes.*
> **Interviewee:** *There are three things I want to look at in order to identify whether VitaminCo should enter the new market. First, I'd like to look at why VitaminCo wants to move into the new product lines. To understand that, I'd want to look at its profitability and growth rates of the segments it currently operates in. Second, I'd like to look at the market size of the health foods and beverages space to see if there is space for a new market entrant. And finally, if there is space in the marketplace, I'd like to identify the best strategy to move into the space (i.e. M&A or joint venture). Does that sound good to you?*
>
> **Interviewer:** *Yes, what would you like to look at first?*
>
> **Interviewee:** *I'd like to start off by understanding why VitaminCo wants to enter a new market. To do so, I think it'd be most beneficial to look at their profitability over the last couple of years to understand what has been an issue within the company.*

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4   VitaminCo. Case. (2010). The University of Michigan Ross School of Business MBA Consulting Club. [PDF File].

Let's stop right here. Notice what the interviewee did in the last dialogue. The interviewee started off by stating what he wanted to look at, and then gave a reason for why he thinks that is the right first step. This is what *hypothesis-driven thinking* is characterized as. You should always give a reason for why you think you'd want to look at a data point, and then ask for it. If you don't do so, it'll look like you don't know how to drive the case and break down a problem appropriately.

For the purposes of this guide, we will not go any further into solving interviewee-led cases, as most cases you will encounter will be interviewer-led cases. The purpose of this section was to introduce *hypothesis-driven thinking*, which will be an important notion in the remaining sections. If you'd like to learn more about solving interviewee-led cases, go on Bain's website to understand the finer intricacies.

Drawing Advanced Insights

Hypothesis-driven thinking is crucial in getting to that next level of mastering case interviews, and hence, this notion is extremely important for drawing advanced insights in brainstorming questions and analyzing charts & graphs.

Brainstorming Questions

Demonstrating higher-level thinking for brainstorming questions is derived from being hypothesis-driven. Let's take a look at how to practice this from an earlier example.

Interviewer: *Identify ways that our client can increase sales through internal changes within the next four years.*

Interviewee: *Can I take a moment to collect my ideas?*

Interviewer: *Sure.*

Interviewee: **After about 45 seconds**
There are a couple of ways to increase sales through internal changes:

1. *Conduct R&D to invest in products such as tissues or bathroom cleaning supplies that we don't currently sell*
2. *Strategically sell products in regions with high demand for paper or cleaning products, which would mostly be in the developing and developed countries*
3. *Advertise our products more aggressively if we there is a lack of brand recognition with our company*
4. *Optimize pricing to sell more volume/increase sales through competitor pricing analysis*

I'd first like to look at R&D because it allows us to control what products we need to invest in. With proper due diligence, we can identify which items Grime Co. should invest in to increase their sales the most. We can do so by analyzing customer trends and aligning those with what our competencies are within paper and cleaning (hypothesis).

Notice that although this is not an interviewee-led case, the interviewee concluded the answer

with a hypothesis. Whether that hypothesis is right or wrong is not as important as the fact that the interviewee demonstrated that they were forward-thinking in their response. As long as you can show reasonable higher-level thinking, you will show the interviewer that you have strong critical thinking. It is also important to be flexible. If your hypothesis is proven incorrect, you must adapt and change accordingly.

In addition to being hypothesis-driven, you should tie things back to information you already know. Usually, each question will lead into the next. So, by referencing information that you already know and leveraging that to find appropriate solutions, you will demonstrate your ability to balance considerations to come to the best strategy available.

By combining these two tactics, you'll be able to demonstrate strong analytical and interpersonal skills.

Charts & Graphs

Charts & graphs are another medium through which the interviewer will test your qualitative or quantitative abilities.

There is a simple structure you can follow to analyze these visual mediums. All you need to do is answer three questions while looking at a chart/graph: what, why, and how.

1. What information are you looking at?
2. Why could these patterns be emerging?
3. How will this information help you move forward with the case?

Similar to other questions, you are drawing insights and then using a hypothesis to drive the case forward or demonstrate higher-level thinking. The *hypothesis*, in this situation, comes from answering the how question.

Charts & Graphs are the final advanced topic in case interviewing. Once you've mastered all of the topics we've discussed throughout this guide, you can consider yourself familiar with **all** aspects of a case interview. Practicing each type of topic will allow you to feel comfortable and prepared for your case interview. At the end of the day, you **never** want to be surprised by a question or format in an interview, and practicing will help you avoid any day-of surprises.

Conclusion

You now have the fundamental tools to be successful at case interviews. Remember that like anything, practice makes perfect. Every time you do a case, write down your feedback. And the next time, pick a couple of things to improve upon and focus on them. Repeat. Follow these steps, and you will be on your way to mastering the case interview.

In addition, in this guide, we discussed the consulting industry and recruiting best practices. You learned that because there are many different specialities and firms within the consulting industry, it is paramount to prepare for the case interview, behavioral interview, and the recruiting timeline in general. Moreover, it is even more important to network early and often with each firm you're interested in, so that you understand their unique market position, service offerings, and job opportunities for Penn State students.

We understand that this is a lot. But each of us can confidently say - it's worth it. The selection criterion for incoming consultants is extremely well-thought out and meritorious. There is a direct correlation between your effort now, and your ability to effectively, quickly, and accurately solve business problems. Moreover, you'll be doing work that makes a difference - you'll be solving the most difficult challenges companies are facing on a daily basis. We strongly encourage you to use this guide as a stepping stone, and utilize the resources around you to build a strong platform that will allow you to succeed and land the offer you want. If you have any questions, don't hesitate to reach out to us and connect via LinkedIn - we are more than happy to help you achieve your goals.

Good luck!

Appendix
Appendix 1: Consulting Checklist

Freshman Year	Get involved, learn about consulting, and the opportunities that exist.
Fall Semester	☐ Sign up and join relevant clubs or opportunities (i.e. consulting orgs, business fraternities, research labs, etc.) ☐ Create a LinkedIn profile and a college-level resume (utilize your peers and career offices for help) ☐ Sign up for Nittany Lion Careers to search for internship opportunities and career events
Spring Semester	☐ Participate in case competitions (this will help you develop a relationship with firms sponsoring the competition) ☐ Speak with older students about their experiences ☐ Seek leadership positions within organizations you're in ☐ Look for internships, study abroad programs, externships, conferences, or other ways to get involved in the summer
Summer	☐ Start building a "strategic plan" for your next two years, and what steps you need to take to accomplish your goals ☐ Identify mentors and students at Penn State and elsewhere who can help you achieve those goals and have conversations with them ☐ Enjoy what you're doing in the summer!
Sophomore Year	Expand your consulting network and prepare for sophomore leadership programs.
Fall Semester	☐ Perform well in your leadership positions and establish on-campus accomplishments ☐ **Maintain a high GPA** ☐ Recruit for the best internships available to sophomores ☐ Compete in the PwC case competition (Challenge) ☐ Attend any firm visits/networking sessions you can
Spring Semester	☐ Compete in the Deloitte case competition ☐ Network with consulting firms for leadership programs ☐ Apply to leadership programs for Big 3 and Big 4 ☐ Begin practicing case interviews and behaviorals ☐ Keep going for leadership positions
Summer	☐ Identify the firms you'd ideally like to work for and order them by preference ☐ Schedule private networking calls with consultants at those companies ☐ Work with multiple advisors/mentors to perfect your resume ☐ Follow the guide below for case preparation

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Appendix 1: Consulting Checklist

Junior Year	Work hard to get the offer you want by preparing until interviews begin.
Fall Semester	☐ Attend every event you can and network (keep scheduling networking calls) ☐ Continue to practice case and behavioral interviews ☐ Apply and interview with each firm you are interested in ☐ If you don't get a consulting offer, go for something else!
Spring Semester	☐ Continue to excel in the organizations you're a part of ☐ If you didn't get the offer you'd hoped for, relax! You have time.
Summer	☐ Focus on doing well and having impact during your internship ☐ Network and prepare for case and behavioral interviews like the previous summer
Senior Year	Get the full-time offer and then relax!
Fall Semester	☐ Recruit for full-time positions similarly to the strategies suggested above ☐ Beware of expiring full-time offers
Spring Semester	☐ Speak to and mentor younger students seeking consulting opportunities ☐ Just enjoy your remaining time in college!

Appendix 2: Case Preparation Timeline

Sophomore Year	Get a basic understand of case interviews and start practicing!
Fall Semester	□ Learn about what case interviews are □ Read *Case In Point* by Marc Cosentino □ Do around 2-3 cases to familiarize yourself with the format
Spring Semester	□ If you get interviews for leadership conferences: practice around 1-2 cases per week starting 2-3 weeks prior to interviews (depending on how intensively you like to prepare) □ Watch Victor Cheng videos and follow the case prep portion of this guide □ If you don't, you can relax until the summer
Summer	□ Around end of May, you want to start case prepping □ Conduct interviews with friends, peers, or consultants you've networked with □ Do around 1 case a week or every other week from June to mid August □ Be sure to learn from these cases, improve upon the feedback that you've received as mentioned in the guide earlier □ After doing a case, wait 2-3 days and go back and review the feedback and the entire case. Try to approach the issue in a different manner (this is where you should see your greatest improvement)
Junior Year	Keep prepping until interviews and then relax!
Fall Semester	□ Take some time off between mid August to early September depending on timeline of interviews □ Instead of case prepping, go back and review older cases □ Start doing 2 cases a week 2-3 weeks prior to interviews (depending on how intensively you like to prepare)
Spring Semester	□ If you didn't get the offer you'd hoped for, relax! You have time. □ No need to prep until the summer
Summer	□ Repeat the same steps from the previous summer □ However, this time you don't have to start case prepping until July because you already know what to expect
Senior Year	Get the full-time offer and then relax!
Fall Semester	□ Follow similar steps as the fall semester before (adapt case prep habits according to your preferences as needed)

Appendix 3: Victor Cheng Frameworks

BUSINESS SITUATION FRAMEWORK
New Market Entry, New Product, New Business, How to Grow, Strategy, Turnaround, Company Position Assessment

Customer

Who is the customer?
- identify segments (segment size, growth rate, % of total market)
- compare current year metrics to historical metrics (look for trends)

What does each customer segment want? - identify keys needs
What price is each segment willing to pay? - determine price points and price elasticity/sensitivity
Distribution channel preference for each segment
Customer concentration and power* (does one customer control all the demand, the "Wal-Mart" effect)

Product

- **Nature of product** (think out loud about the product, it's benefits, why someone would buy it)
- **Commodity good or easily differentiable goods** (could company increase differentiation)
- Identify **complimentary goods** (can we piggy back off growth in compliments or near compliments?)
- Identify **substitutes*** (are we vulnerable to indirect competitors namely substitutes?)
- Determine **product's lifecycle** (new vs. almost obsolete)
- Packaging (optional) - what's bundled, included (ex. Razor vs. razor blades, with w/o service contract... can change in packaging make product more likely to meet needs of specific customer segments.)

Company

- **Capabilities and expertise**
- **Distribution channels** used
- **Cost structure** (mainly fixed vs. variable - is it better to have higher fixed cost with lower variable, or vice versa. High fixed cost = barrier to entry.... compare to industry, often insightful)
- Investment cost (optional: only if case involves an investment decision)
- **Intangibles** (e.g., brands, brand loyalty)
- **Financial situation**
- Organizational structure (optional: e.g., is team organization in conflict with how customers want to do business. Ex: We're organized by product line, but customers want one point of contact across all product lines)

Competition

- **Competitor Concentration* & Structure** (monopoly, oligopoly, competitive, market share concetration)
- Competitor behaviors (Target customer segments, products, pricing strategy, distribution strategy, brand loyalty)
- Best practices (are they doing things we're not?)
- **Barriers to entry*** (do we need to worry any new entrants to market?)
- **Supplier concentration*** (optional: ex: Microsoft or Intel in PC Market... use full 5 forces if this is a likely issue)
- Industry regulatory environment
- Life-cycle of industry

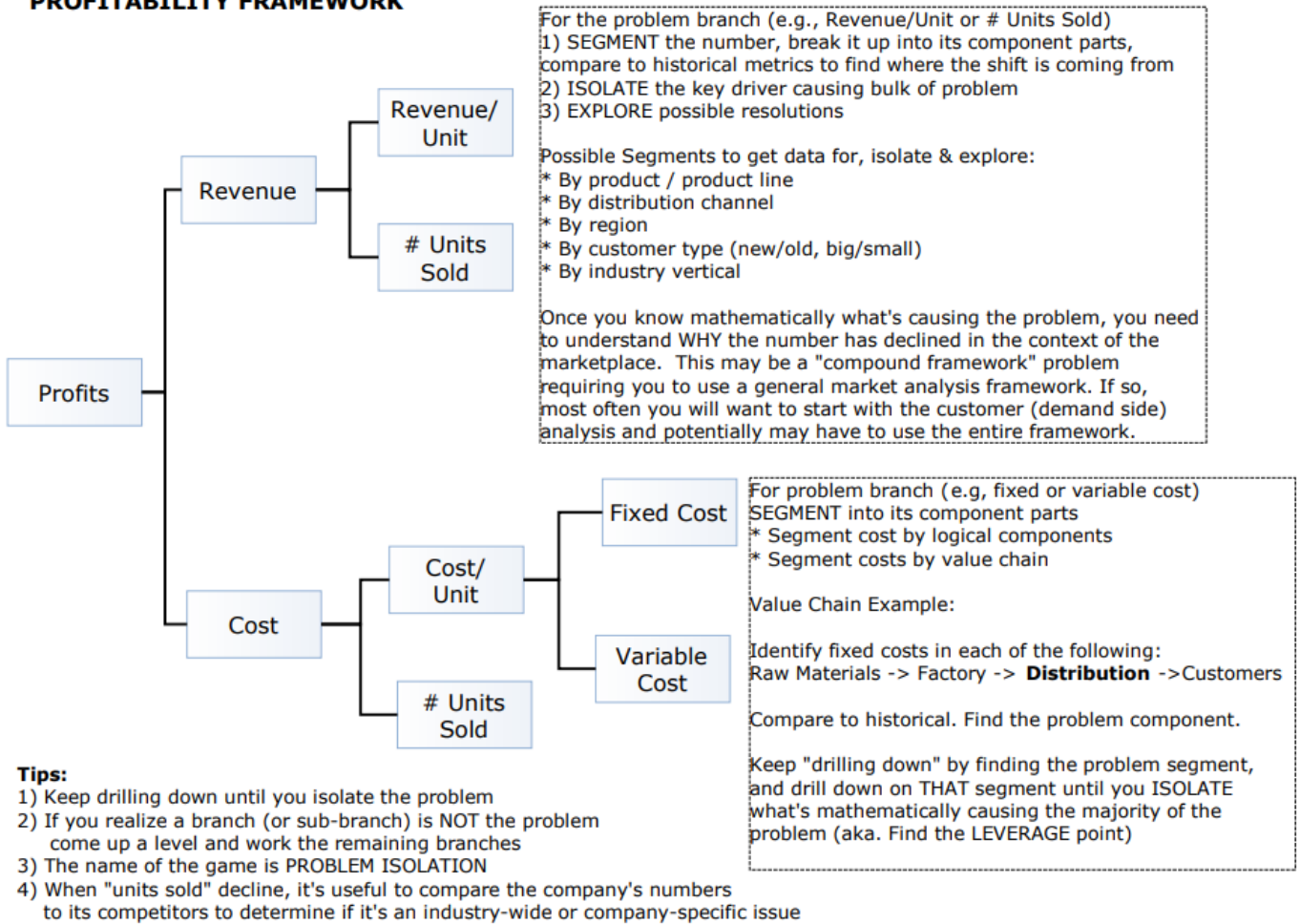* From Porter's Five Forces: An excellent framework that I've incorporated into this one. I don't use five forces separately for no other reason than habit/preference (though I do use the concepts). If you're not familiar with five forces, it's worth reading up on it.

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Appendix 3: Victor Cheng Frameworks

PROFITABILITY FRAMEWORK

```
                              ┌─── Revenue/
                              │      Unit
              ┌─── Revenue ───┤
              │               └─── # Units
              │                      Sold
Profits ──────┤
              │                          ┌─── Fixed Cost
              │               ┌─ Cost/ ──┤
              │               │   Unit   └─── Variable
              └─── Cost ──────┤                Cost
                              └─── # Units
                                     Sold
```

For the problem branch (e.g., Revenue/Unit or # Units Sold)
1) SEGMENT the number, break it up into its component parts, compare to historical metrics to find where the shift is coming from
2) ISOLATE the key driver causing bulk of problem
3) EXPLORE possible resolutions

Possible Segments to get data for, isolate & explore:
* By product / product line
* By distribution channel
* By region
* By customer type (new/old, big/small)
* By industry vertical

Once you know mathematically what's causing the problem, you need to understand WHY the number has declined in the context of the marketplace. This may be a "compound framework" problem requiring you to use a general market analysis framework. If so, most often you will want to start with the customer (demand side) analysis and potentially may have to use the entire framework.

For problem branch (e.g, fixed or variable cost)
SEGMENT into its component parts
* Segment cost by logical components
* Segment costs by value chain

Value Chain Example:

Identify fixed costs in each of the following:
Raw Materials -> Factory -> **Distribution** ->Customers

Compare to historical. Find the problem component.

Keep "drilling down" by finding the problem segment, and drill down on THAT segment until you ISOLATE what's mathematically causing the majority of the problem (aka. Find the LEVERAGE point)

Tips:
1) Keep drilling down until you isolate the problem
2) If you realize a branch (or sub-branch) is NOT the problem come up a level and work the remaining branches
3) The name of the game is PROBLEM ISOLATION
4) When "units sold" decline, it's useful to compare the company's numbers to its competitors to determine if it's an industry-wide or company-specific issue

Appendix 3: Victor Cheng Frameworks

MERGERS & ACQUISITIONS "FIT" FRAMEWORK

Use this framework when Company A is looking to acquire or merge with Company B, AND the two companies are different.
This framework determines if there's a good fit. If Company A & B are nearly identical, use a capacity expansion framework instead.

"Fit Framework" - General Idea: Use "Core Business Situation Framework" and run it for Company A, Company B, and Company A+B

This framework does not answer the question IF it's a good idea to merge/acquire. It assumes you already know that it IS a good idea and the question is whether or not this particular target company is good fit. To determine IF merging/acquiring is a good idea, use Capacity Expansion Framework instead

	Customers	Products	Company	Competition
Company A				
Company B				
Company A+B				

- Identify synergy in new company
- Identify opportunities for one-way or mutual exploitation (Classic good "fit" = Company A has huge sales force buy lousy products,
- Company B has minimal salesforce but killer products. Potential sources of synergy: customers, products, distribution, resources, expertise, access to markets, physical assets, unique capabilities, overlapping cost structures)
- Hint: Every time there's a synergy, that's one vote in the "good fit" column

Appendix 3: Victor Cheng Frameworks

CAPACITY CHANGE FRAMEWORK

ABC Company is considering adding capacity (e.g., building a new factory), reducing capacity or acquiring a DIRECT competitor. This is a good framework when understanding industry capacity is the ONLY factor. If there are "fit" issues, use the Mergers & Acquisitions "Fit Framework" instead.

Demand	**Supply**	**Cost of Expansion**
Determine growth in overall market (How sustainable?) Determine Growth in firm's market share (How sustainable?) Segment sources of demand * Determine each segments share of total demand * Identify trends in demand by segment Focus on the largest sources of demand and the largest growth rates... use these few "leverage" points help you understand where the majority of demand is heading	Determine industry supply Segment industry supply by market / market segment Identify effect of increases in supply on prices Possible Benefits Introduce technology innovations with capacity expansion Increase productivity -> Lower marginal costs heading	Real costs (can the firm afford it) Opportunity cost - payback period - break even point Alternatives - outsource - lease - sub-contract

- For many if not most capacity related cases, figure out if this is a conceptual case or a numerical case. If conceptual (20% of time), use this framework. **If numerical (e.g, Company A can produce 20 million units at $4, Company B 10 million units at $3.50), then you should graph out supply curves and overlay them with demand curves. (Tip: practice drawing demand curves from data quickly)**
- The typical issue is if we add/reduce capacity, what will happen to the market clearing price... once we know the market clearing price what impact does that have on profitability... and given that impact should the client add/reduce capacity.

Appendix 3: Victor Cheng Frameworks

CASE INTERVIEW REMINDERS

- Compare current year metrics to historical to **FIND THE TREND**

- Compare "company/client" metrics (revenues, gross margins, unit sales, pricing, changes in segment mix, product mix) to competitors' metrics to determine is it a **COMPANY-SPECIFIC or INDUSTRY-WIDE** problem since you solve these problems very differently

- Totals and Averages are very misleading.... Always **SEGMENT YOUR METRICS**
  Example: Total sales are flat, but Segment A represents 20% of sales, and Segment B represents 80%... Segment A grew 100% this year, Segment B declined by 25%... BUT total sales were FLAT. If you don't segment, you **MISS THE WHOLE POINT** .

- **ALWAYS, ALWAYS SEGMENT...** Whenever you want to segment numbers but aren't sure which way, just say, "It seems like getting a more detailed breakdown of revenues would be helpful, do we have any more detailed data on revenues. Often the interview will volunteer the segmentation pattern"

- Oh yeah, did I mention... always, always **SEGMENT YOUR NUMBERS** !

- Segment revenues (by product, channel, customer type, region) (total revenues, revenues per unit)
- Segment costs (by fixed vs variable, costs within each segment of value chain) (total costs, cost per unit)
- Segment customers (by demographics, needs, purchasing patterns, price point, other)
- Segment competitors (by channel, region, product, customer segment)

- **Think Out Loud** (Usually in response to receiving some data and realizing your hypothesis is right or wrong)

- **Ignore** your previous knowledge and only use data from the case

Appendix 4: Paper Layout

Case title	**Write the question here**
Take notes here (i.e., any information the interviewer gives you)	**Write down your thoughts here** (e.g., drawing your framework, brainstorming, or doing math calculations

Appendix