



Boston University Questrom School of Business Case Interview Guide



TABLE OF CONTENTS

I. Introduction to Case Interviews 3-10

- a. What is a Case Interview?
 - Why the case?

- b. What kind of case will I get?
 - Classic Case Interviews
 - Guestimates
 - Brainteasers
 - The Case Checklist
 - Sample list of employers that give cases

- c. Case Frameworks
 - Types of frameworks
 - A word about frameworks and when to use them
 - Strategic Considerations for M&A Frameworks
 - An In-depth Look at Porter's Five Forces
 - An In-depth look at Profitability

II. Practice Case Interviews 11-25

- a. Brainteasers
- b. Critical Thinking
- c. Profitability
- d. Market Sizing
- e. M&A (Mergers and Acquisitions)
- f. Operations/Price Strategy

III. Resources 26-27

- a. Books
- b. Online Resources (<http://casequestions.com/>, cq interactive, etc.)
- c. UDC Career Services (we coach more on techniques for appropriate delivery the items listed in the intro. above)
- d. BUCG Mock Cases on Friday's



A. WHAT IS A CASE INTERVIEW?

Simply put, a case interview is the analysis of a business question. Unlike most other interview questions, it is an interactive process. Your interviewer will present you with a business problem and ask you for your opinion. Your job is to ask the interviewer logical questions that will permit you to make a detailed recommendation. The majority of case interviewers don't have a specific answer that you, the candidate, are expected to give. What the interviewer is looking for is a thought process that is both analytical and creative (what consultants love to call "out-of-the-box" thinking). Specific knowledge of the industry covered by the case question is a bonus but not necessary.

Why the Case?

Consultants know that a resume, at its very best, is only a two-dimensional representation of a multi-faceted, dynamic person. And because consulting firms depend on employing those multi-faceted, dynamic people, the firms rely heavily on the case interview to screen candidates. Consultants must have a select set of personality and leadership traits in order to be successful. The consultant's work environment is extremely turbulent. There are nonstop co-worker changes, hostile client environments, countless political machinations, and near-perpetual travel. These factors mandate that an individual be cool under pressure, be influential without being condescending, be highly analytical, have the ability to understand the smallest aspects of a problem (while simultaneously seeing the big picture), and have the ability to maintain a balance between the personal and professional. All these factors necessitate a unique interview structure focused on assessing a candidate's ability to manage these particular circumstances with professionalism and excellence. The case interview has evolved as a method for evaluating these characteristics. [Ref. Vault Case Interview Guide.](#)

B. WHAT KIND OF CASE WILL I GET?

What case interviews are not designed to do is to explore educational, professional, or experiential qualifications. If you've reached the case interview stage, take a deep breath - the consulting firm has already weighed your background, GPA, and experience and found you worthy of a deeper skill assessment. Case interviews vary widely, but in general they fall into three groups: business cases, guesstimates, and brainteasers. [Ref. Vault Case Interview Guide.](#)

Classic Case Interviews

Case interviews vary somewhat in their format.

- The classic and most common type of case interview is the business case, in which you're presented with a business scenario and asked to analyze it and make recommendations.
- Most cases are presented in oral form, though some involve handouts or slides, and a few are entirely written. (In a written case, the interviewer will not contribute any other information besides what's on the handout.)
- Another variation on the case interview is the group case interview, where three to six candidates are grouped together and told to solve a case cooperatively. Consultants from the firm watch as silent observers. Some firms now ask candidates to do presentations, and in this format they may allow you a couple of hours to prepare your PowerPoint show.
- Though you should certainly be prepared for these variations on case interviews, you are most likely to come across the traditional, one-on-one case interview. [Ref. Vault Case Interview.](#)

Guesstimates

Guesstimation sometimes is necessary as part of the case interview. For example, as part of a case that involves the pros and cons of introducing a new product, you might need to guesstimate the market size. Whether free-standing or as part of a case, learning how to make “back-of-the-envelope” calculations (rough, yet basically accurate) is an essential part of the case interview. As part of a guesstimate, you might be asked to estimate how many watermelons are sold in the United States each year, or what the market size for a new computer program that organizes your wardrobe might be. (For example, you might need to figure out the market size for the wardrobe software as a first step in determining how to enter the European market.) Understand that the purpose of this exercise is to test your ability to think on your feet - specifically, to apply logic to assumptions. You will not be expected to get the exact number, but you should come close-hence the guesstimate. Non-business school students and others who appear to be weak quantitatively may get stand-alone guesstimates- guesstimates given independently of a case.

Ref. Vault Case Interview Guide.

Brainteasers

Brainteasers are normally logic puzzles or riddles. They may be timed. Often, brainteasers are meant to test both analytic and “out-of-the-box” thinking, as well as grace under pressure. While there’s no way to tell for sure what case question you’ll get, there are some things that can tip you off to the kind of case you’ll receive. If you’re an undergraduate or other non-MBA student, you can probably be safely assured of getting a creative or “open-ended” question. “We don’t expect our undergraduate candidates to know that much about business” confides one interviewer. “What we do expect is the ability to break down and articulate complex concepts.” Undergraduates are also much more likely to get guesstimates and brainteasers than MBAs. Are you a business school student or graduate? Then your case question will probably be less open-ended and drive toward an actual solution. Your interviewer may posit something from her own experience - knowing what course of action the consultancy actually ended up recommending. This doesn’t mean you have to make the same recommendation - but you’d better be able to back up your reasoning! Ref. Vault Case Interview Guide.

The Case Checklist

You may be able to tell the difference between the Four Cs and the Four Ps, but don’t get so hung up on memorizing frameworks that you forget some basic steps that can make the difference between a great case and one that goes less than smoothly.

Tips to Prepare for the Interview

- **Research the Career:** Make sure you know what the work tasks, the work environment, and the lifestyle are like. The company will want to be sure you know what you are getting into and are fully committed to it.
- **Research the Company:** Learn its main areas of opportunity and how it perceives its strengths. For example, some consulting companies focus on strategy, while others specialize in operations. Many consulting companies offer sample cases online. At the very least, carefully read the “About Us” statement on the webpage.
- **Bring the Following Items with You:** A pen, a watch, a pencil, a pad of paper, some graph paper, and a calculator. Usually you are not allowed to use a calculator, but if you are, you’ll be glad you brought one. Ref. Vault Case Interview Guide.

During the Case

- **Keep Track of Who Spoke with You:** Ask for the business card of anyone who spends time talking with you. These will come in handy when it’s time to send thank-you notes.
- **Don’t Ignore the Chitchat:** Your interviewer is evaluating you on your potential for poise and teamwork as well as sheer mental horsepower.

- **Be Consistent, but Not Monotonous:** In most consulting firms, interviewers keep notes on what they talked to you about, what you talked about, and your strengths and weaknesses. If you have one joke that you like to tell or one story about your great leadership ability, it'll wear a little thin (in the eyes of your interviewers). At the same time, your interviewers will note inconsistencies in statements that you make.
- **Take Notes When Your Interviewer Is Describing the Case:** Otherwise, you may miss important points. You may generate as many as four or five pages of notes. Write on only one side of the paper so you don't have to flip papers repeatedly. Circle or underline the most important points so you will be able to summarize the case effectively. You may want to use drawings as well as words.
- **Clarify the important points of the case with the interviewer:** This will both concentrate your mind and let you know if you've conceptualized the case correctly. If you have drawn a portion of your notes (for example, a decision tree), you may find it helpful to show the drawing to your interviewer. For a nice touch, use one sheet of note paper to mock up the headings on what would be the final slide of a PowerPoint presenting your recommendations for the case. (Use large lettering.) Show this to the interviewer to explain how you perceive the objectives of the case. Later, the headings will keep you on track as you work through the problem. Finally, when you have filled out the key facts or recommendations for each heading, you can turn it around and step the interviewer through it.
- **Don't Be Afraid to Ask for Help:** Phrase your questions in the form of a statement (just think - the opposite of Jeopardy). If you're having trouble interpreting a graph, say "I would interpret these numbers as stating that the cost of our production of widgets is rising rapidly. Am I on the right track here?") Your interviewer will be more likely to help you than if you stare at her blankly and plead for mercy.
- **If You Make a Mistake, Don't Panic:** "You can mess up an interview and still get the job," advises one consultant. Remain calm, and ask for pointers on where you went wrong. Consultants like people who ask questions.
- **End the Interview with a Smile:** Try to avoid looking drained; consultants need to have stamina. Don't act offended if the interviewer collects your notes at the end of the interview. They often do this to gain additional insight into your ability to summarize facts, your organization, and how you did your math.
Ref. Vault Case Interview Guide.

After the Case

- **Send Thank-You Notes:** The sooner the better. E-mail works, and you will achieve the best results if you explain why you are still interested in the firm and if you cite specific things about the interview in a positive light. Make sure your spelling is correct. Ref. Vault Case Interview Guide.

Sample list of Questrom/BU Employers that give cases:

Accenture	PwC	Macy's
EY	KPMG	Liberty Mutual
KPMG	IQVIA	Workday
Deloitte	TJX	P&G
IBM	Wayfair	Hubspot
Cognizant	Abraic	Epic

C. CASE FRAMEWORKS

Framework	Defined	When to use it?
M&A Framework	Mergers & Acquisitions	Evaluate a potential acquisition
Porters Five Forces	Supplier Power, Buyer Power, Threat of New Entry, Threat of Substitution, Competitive Rivalry	Evaluating Industry Profitability
Profit Tree	Profit = Revenues - Costs	Evaluate Profitability Issues
4 C's	Customer, Competition, Cost, Capabilities	New Product to Market
Business Situation Framework (3 C's 1 P)	Customer, Competition, Company and Product	Evaluative a Company's Situation Qualitatively
4 P's	Price, Product Position/Place, Promotions	Evaluating the Market
Seven S's Framework	Strategy, Structure, Systems, Shared Values, Skills, Style, Staff	Evaluate Internals of a company
Rule of 72	Indicates roughly how long it will take for an investment to double.	$72/\text{Interest Rate} = \text{Number of Years Doubled}$

 = preview provided below

A Word About Frameworks...

All the frameworks detailed above are widely used, and most business schools teach them as part of their core curriculums. Your interviewers will instantly recognize when you are applying them, since they are already familiar with the techniques. While this is fine, consider that you are trying to demonstrate your unique analytical and deductive reasoning skills that set you apart from other candidates. You must be creative and original in analyzing case questions. **Use these frameworks sparingly, and be careful not to force an inappropriate framework onto a problem.** TIP: No interviewer will be impressed if you proudly proclaim, "I'm going to apply Porter's Five Forces now." Apply frameworks without identifying them.

M&A Framework

Industry Attractiveness

How attractive is the industry?

- Is it structurally attractive today? (5F) Nice profits for incumbent firms?
- Will it be more attractive in the future? Growth in revenues and profits?
- Are there barriers to entry? (and is "build" an option for us?)

Target Co. Competitive Positioning

Is this Target Co. well positioned?

- Does the firm have competitive advantage? (SI422)
- Will it sustain its competitive advantage? (SI422)
- Will it gain market share, thus outgrowing the market?

Base Case Cash Flow & Payback

Is the acquisition price attractive?

- What is the purchase price?
- What are the base case cash flows?
- What are the NVP (or in SI432, what is the payback period)?
- Time-honored acquisition metric in traditional businesses:
 - 5-8K cash flow= inexpensive; 9-10% cash flow= getting expensive
 - these numbers also equate to payback period!!

Strategic Fit: Enhanced Case Cash Flow & Payback

Is the picture improved by Strategic Fit? (SI432)

- Is there WTP boosting? (i.e., green ink on the BO Test)
- Are there cost synergies or economies of scope? (i.e., green ink on the BO Test)
- What are the resulting enhanced cash flows, and the revised payback period?

An In-Depth Look at Porters Five Forces

Definitions for the Five Forces Material

Industry

- Define the industry based on finding firms that sell similar products or services with common suppliers and buyers
- The Five Forces analysis tells us how attractive (aka profitable) the industry is

Supplier Power

- Suppliers are organizations that firms in the industry PAY
- High Supplier Power means suppliers have power (or bargaining leverage) over the industry

Buyer Power

- Buyers are organizations that PAY firms in the industry
- High Buyer Power means the buyers have no power over the industry

Rivalry

- Rivals are firms in same industry (aka competitors)
- High Rivalry means there is intense competition in the industry

Substitutes

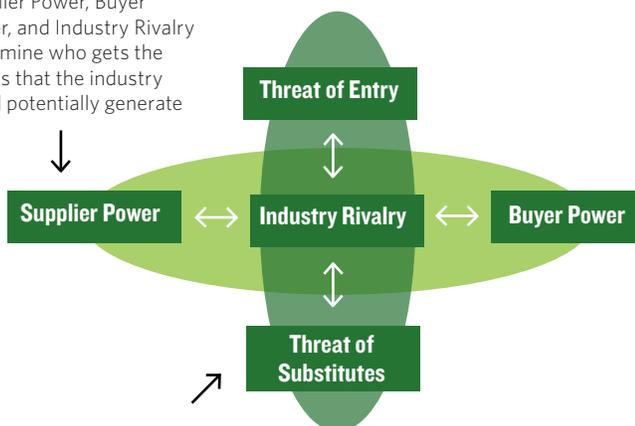
- Substitutes are products or services that could be alternatives to industry's products (with compelling price-to-value ratio)
- High Threat of Substitutes means there is at least one very compelling substitute

Potential Entrants

- Firms (current/potential) that could enter the industry
- High Threat of Entrants means there is a high risk this could happen

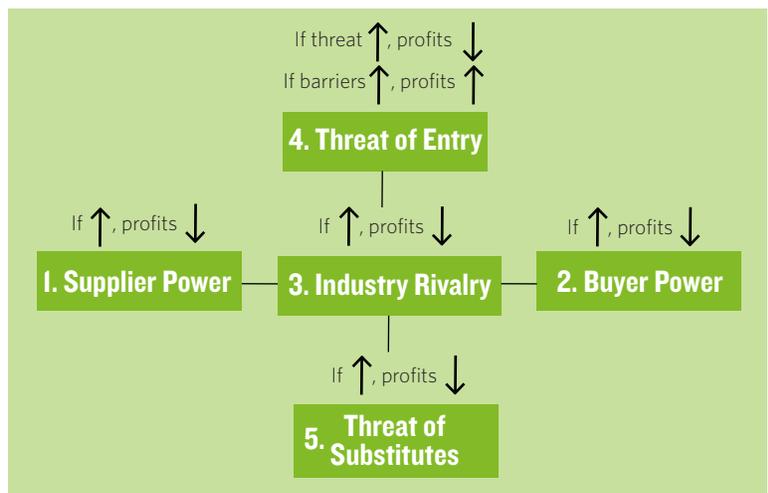
The two dimensions of the Five Forces

Supplier Power, Buyer Power, and Industry Rivalry determine who gets the profits that the industry could potentially generate



The Threat of Entry and Threat of Substitutes determine whether incumbents keep profits and if the industry can continue to generate any profits at all

Porter's Five Forces: If the 5F are high, we would expect lower industry profits; if the 5F are low, profits higher



Source: Michael Porter, "How Competitive Forces Shape Strategy," Harvard Business Review, March-April 1979

For each of the Five Forces, there are numerous determinants (or “industry conditions”)

Determinants of Threat of Entry:

- Economies of scale- spread fixed costs over more units
- Powerful brands
- Capital requirements
- Access to distribution
- Government policy

Determinants of Supplier Power:

- Differentiation of product (inputs) causes high switching costs
- Supplier concentration vs industry
- Importance of volume to supplier
- Cost relative to total purchases in the industry
- Threat of forward integration by suppliers

Rivalry Determinants:

- Industry growth
- Demand conditions (overcapacity)
- Exit barriers
- Product differentiation
- Brands important to customers
- Industry concentration

Determinants of Buyer Power:

- Buyer switching costs
- Product differentiation
- Brands important to customers
- Bargaining leverage
- Buyer concentration vs industry
- Buyer volume significant

Determinants of Substitution Threat:

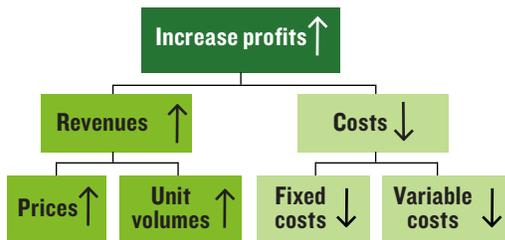
- Relative price performance of substitutes
- Switching costs
- Buyer propensity to switch

Rivalry Examples: All industry conditions would indicate “high rivalry”

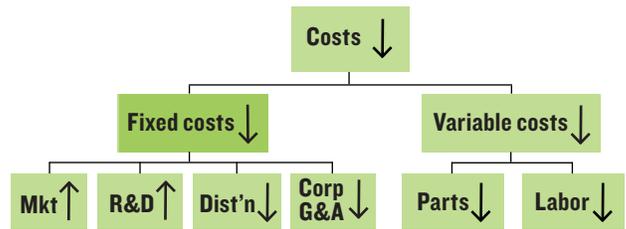
Sources of Rivalry	Industry Example	Reason for “Infighting”
Industry growth is low	Wireless carriers	Firms are competing on price to try to win clients and gain market share
Demand conditions are low (overcapacity exists)	Airlines	There have been many empty seats on airplanes
Exit barriers exist	Shipbuilders	Defense spending decreased (1960s), forcing Litton industries to stay in declining market due to highly specialized (and expensive) facility
Product differentiation is low	Plastic bottle manufacturers	Plastic bottles are a commodity product with virtually no product differentiation
Brand identities are non-factors	Gasoline	Automobile owners do not care about brand
Highly perishable products (or high storage costs)	Farmers market vendors	As the day goes on, vendors will slash prices to unload their products
Fragmented market (too many players)	Taxi drivers	In NYC, the number of drivers is 3x the number of driver positions available

An In-Depth Look at Profitability

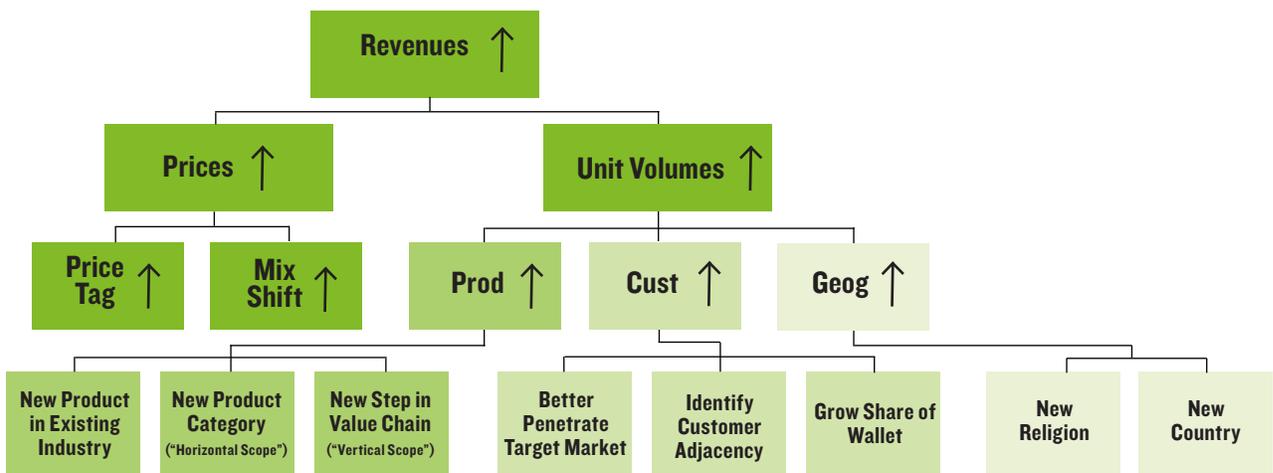
How can a firm improve its profitability?



To reduce costs, the firm can either improve its fixed costs or its variable costs



To grow revenues, the firm can either raise prices or grow unit volumes



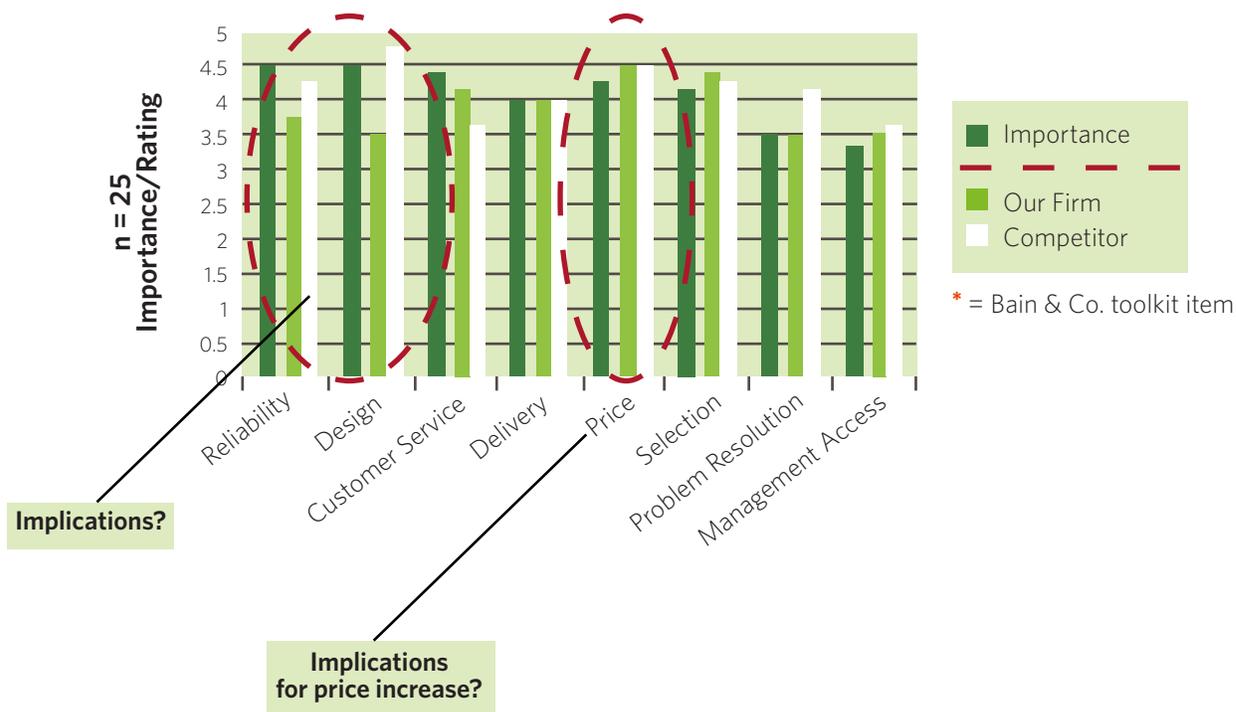
Next step: you should be prepared for a deeper dive at the bottom of each branch

- Recommended approach: walk through the general profit-improvement structure first (in ~3 minutes). This is called "making your thinking visible"
- Then work your way through each branch (or perhaps the interviewer will guide you). Example- Pricing Branch:
 - o "Ok, now let's consider that possibility of raising prices (exchanging the price tag!). What analysis would you conduct to see if a price increase might work?".
 - o Sample Analysis:
 - Not: "I would do a pilot"... that might be the first step of the "how"
 - Pricing relative to our competition
 - Pricing trends (for us/industry)
 - In past increases, effects on volume? (Price elasticity)
 - Customer survey work:
 - › Not: "What would you pay?" (Customers can't answer this directly)
 - › Gather customer purchase criteria... looking for relative importance of price to our customers... if #1 most important, they are "price sensitive"
 - › Then gather customer satisfaction data (relative to competition) on each criteria
 - › Implications: if the price is customers' #1 most important criteria, and they are relatively dissatisfied with our prices, price increase NOT a good idea
 - › If price not very important, and they are relatively satisfied with our prices, perhaps we could boost our prices

Preview of SI432 session: “comb chart” * captures customer input

- Basic tool to capture customer feedback
 - o Across the x-axis you list various customer criteria
 - o In this example, n = 25 (customers)
 - o Dark green = average rating of importance to customers
 - o Light green = our firm’s average customer satisfaction rating
 - o White = main competitor’s average customer satisfaction rating

- SI432 content session
 - o You are provided with survey output (in spreadsheet)
 - o You build comb chart
 - o... and (most importantly) formulate
 - Implications
 - Strategic recommendations (yes, CEO-level recommendations jump off this slide!)



CHICKEN EGGS

Introduction (to be said by the Interviewer)

Challenge Level: Moderate
Case Type: Brain Teaser
Industry: Various

Prompt: If 1.5 chicken could lay 1.5 eggs in 1.5 days, how many eggs do 4 chickens lay in 9 days?

Calculations

1. If 1.5 chickens lay 1.5 eggs in 1.5 days, and now the 4 chickens have 9 days, then the present 4 chickens have 6 times as much time to lay eggs. Since 4 chickens would lay 4 eggs in the base case, we multiply 4 by this factor of 6, and get 24.

$(9/1.5=6; 6*4=24)$

Answer

24 eggs

SUGAR CUBES

Introduction (to be said by the Interviewer)

Challenge Level: Moderate

Case Type: Brain Teaser

Industry: Various

Prompt: There is a large cube made of many smaller sugar cubes that are sitting in the sun. Each side of the cube is made up of a 10×10 surface of the smaller cubes. How many sugar cubes are exposed to the sun?

Calculations

1. If 5 sides are exposed to the sun, you can imagine an inner cube size $8 \times 8 \times 8$, which is not exposed to the sun. It means that 512 cubes are not under the sun. There are total of $10 \times 10 \times 10$ small cubs in the big cube, therefore $1,000 - 512 = 488$ cubes are exposed to the sun.

Answer

488 cubes

HOUR GLASS TIMING

Introduction (to be said by the Interviewer)

Challenge Level: Moderate

Case Type: Brain Teaser

Industry: Various

Prompt: You are given two-hour glasses - one measures 7 minutes and the other measures 4 minutes. How would you use the two-hour glasses to measure a continuous time period of 9 minutes?

Calculations

1. Let's name the 7-min and 4-min hourglasses as I and II respectively. The steps are:

- Turn over both glasses simultaneously
- When II expires, turn II over (4 minutes)
- When I expires, turn I over (7 minutes)
- When II expires, turn I over (8 minutes)
- When I expires, you have 9 minutes!

BOSTON TEACHERS

Introduction (to be said by the Interviewer)

Challenge Level: Beginner
Case Type: Critical Thinking
Industry: Various

Prompt: How many teachers are there in Boston?

Calculations

1. Estimate the population of Boston
 - Can start by estimating the overall population of Boston (the population is 670,000 --> any round number between 500,000 and 700,000 would suffice)
2. Product/Competencies: Estimate the child/student population of Boston- Ask student for rationales
 - Split population into percentages depending on age ranges
 - Ex) 5% of population 0-10 years old, 15% of population is between 10-18 years old...
3. Logically assume the number of students per class
 - Any round number between 20-40 students per class would be a reasonable assumption
4. 4 subjects for Students past age 10
 - Each student in middle and high school will have (logically assumed) 4 different teachers
5. Divide total student populations by number of students per class to determine teachers
 - Make sure to multiply age 10-15 answer by 4 because of the 4 different subjects
6. Add up total number of teachers in each age range
7. Determine final answer and make sure student can walk through whole decision making process in order to show their thinking methods and assumptions.

VHS TAPE DELIVERY

Introduction (to be said by the Interviewer)

Challenge Level: Beginner**Case Type:** Profitability**Industry:** Various

Prompt: It is 1990, and you are a college student in New York City. Your friend approaches you with a business idea. He says he wants to start a company that delivers VHS tapes via bike. He wants your help deciding if he should start the business.

The Following Information is Revealed only if Asked by the Candidate

1. Customer: Your friend will target the young, under 30, population. This is a sizeable portion of the NYC market, but your friend thinks his customer base will be 1% of NYC
2. Product/Competencies: The people delivering tapes will be contractors - mostly college kids. They will supply their own bikes. The tapes will be purchased upfront by your friend
3. Competition: There are brick-and-mortar stores, but no other large delivery companies that your friend knows of
4. Profitability
 - Revenue:
 - \$15 per month per customer
 - Costs:
 - \$10,000 upfront investment for the tapes
 - \$5 wage per hour for bikers
 - \$1 per delivery per hour for bikers
 - Bikers will work 40 hours per week and make 3 deliveries per hour.
 - There will be 50 bikers for the first 6 months and 100 bikers for the last 6 months

Closing

Revenue Calculations:

1% of NYC Population = ~7 million people * .01 = 70,000 people
 70,000 people * \$15 per month * 12 months = \$12.6 million

Cost Calculations:

Initial Investment: \$10,000 for tapes

First 6 Months: 50 bikers * 40 hours/week * 26 weeks * (\$5 per hour + \$1 per delivery * 3 deliveries/hour)
 = \$416,000

Last 6 Months: 100 bikers * 40 hours/week * 26 weeks * (\$5 per hour + \$1 per delivery * 3 deliveries/hour)
 = \$832,000

Profit Calculations: \$12.6 million - \$832,000 - \$416,000 - \$10,000 fixed costs = **\$11,342,000 profit**

Recommendation: Based on current projections, your friend will make just over \$11 million in his first year of business. With the numbers he provided, it makes sense for him to begin operations. However, his numbers appear to be very inflated, and perhaps he should re-assess some key assumptions. (This is a higher-level answer)

Risks:

- Technology could change in the near future that threatens VHS
- Other competitors may appear due to the apparent lack of capital requirements
- The assumptions provided may be faulty (what about marketing? For example)

Next Steps:

- Double-check assumptions
- If assumptions are sound, begin building the movie library
- Begin marketing the service to customers and potential bikers

GASOLINE SALES PER YEAR

Introduction (to be said by the Interviewer)

Challenge Level: Beginner**Case Type:** Market Sizing**Industry:** Various

Prompt: Suppose you are flying on a plane with the CEO from Exxon and you want to sell a consulting engagement. He has just left to use the lavatory and you have about five minutes to estimate his yearly revenues from personal automobile gasoline sales in the US (excluding commercial trucks, boats, etc.) How would you go about coming up with this estimate?

Calculations

1. Assume the population of the US: 300M
2. Estimate the number of household: $300M / 2.5$ people per household = 100M households
3. Estimate the number of cars in the US: $100M \times 1$ car per household = 100M cars in the US
4. Estimate the number of gallons filled year:
 - Assume each car gets filled once per week (use 50 weeks per year for simplicity)
 - Assume that average fill up is 10 gallons each time
 - Therefore, total gallons per year = $50 \times 10 \times 100M = 50B$ gallons
5. Estimate total gasoline revenue from US automobiles:
 - Assume average price is \$3.50 per gallon
 - Total Revenue = $\$3.50 \times 50B = \$175B$
6. Estimate total revenue for Exxon:
 - Assume market share for Exxon is 20% (Unless the market share is known, a guesstimate is acceptable as long as the student justifies. E.g. the market is an oligopoly and dominant competitors in such market typically have market shares of approximately 20%.)
 - Total Revenue for Exxon from US personal automobile gasoline sales = $0.2 \times \$175B = \mathbf{\$35B}$

TULSA HOTEL

Introduction (to be said by the Interviewer)

Challenge Level: Moderate
Case Type: M&A/Profitability
Industry: Various

Prompt: Our client is a major hotel chain. They are considering acquiring an existing hotel in Tulsa, Oklahoma for \$20M and expect an ROI of 20% over three years. Should they make the investment?

Overview for Interviewer

This is a profitability case. Discussion should quickly turn to $P=R-C$ and the various drivers of costs and revenues.

On the revenue side, price and volume (hotel occupancy) should be considered, with some discussion about different price and occupancy scenarios – is this a business hotel or a vacation location? Do occupancy rates/prices vary throughout the week? Seasonally? The interviewee should also include other sources of revenue, such as a restaurant in the hotel upkeep, utilities, labor, insurance, booking system, etc.

Additional Factors:

- Changes in the economy and hotel industry that might affect number of guests or willingness to pay.
- Competitor response and potential for new entrants into the market.
- Specifics about our client such as synergies with other hotels in the chain, name recognition, hotel management expertise.
- Risks such as lower than expected demand, entry of new competitors, etc.

Information for Profit Calculations

- Assume single occupancy (only one guest per room).
- If several rooms are reserved at once (for a group traveling together) a discounted group rate is given to each group member.
- Use 50 weeks/year or 350 days/year in calculations. Round yearly profits to the nearest million.
- Assume no seasonality in demand.
- On weekends Tulsa has 600 visitors/day and 50% stay in our hotel (the rest stays with friends/family)
- Group room rate is \$120/night
- Individual room rate is \$150/night
- On weekends 75% of guests are individuals
- On weekdays 40% of guests are individuals
- Weekend hotel occupancy rate is 60%
- Weekday hotel occupancy rate is 75%
- It costs the hotel \$30/room/night for each occupied room
- Fixed costs for the hotel are \$5750/night
- Assume no growth and ignore time value of money

Calculations (Solution I)

Weekend Days

- $600 \text{ town visitors} * 50\% \text{ stay at our hotel} = 300 \text{ weekend guests}$
- $\text{Average weekend rate} = 0.75 * \$150 + 0.25 * \$120 = \$112.5 + \$30 = \142.5
- $\text{Average weekend day profit / guest} = \$142.5 - \$30 = \112.50

Weekdays

- Hotel is 60% occupied on weekends with 300 guests = 500 rooms in hotel
- On weekdays, hotel is 75% occupied = $500 * 75\% = 375$ guests
- $\text{Average weekday rate} = 0.4 * \$150 + 0.6 * \$120 = \$60 + \$72 = \132
- $\text{Average weekday profit / guest} = \$132 - \$30 = \102

Total Profits

- $\Pi/\text{week} = (300 * \$112.5 * 2) + (375 * \$102 * 5) - (5750 * 7) = \$218,500$
- $\Pi/\text{year} = 50 \text{ weeks} * \$218,500 = \$10,925,000$, round to \$11M
- Π over 3 years (assuming no growth/TVM) = 33M
- 20% ROI on 20M is 4M, so require \$12M Π over 3 years to meet goal

\$33M > \$12M, so invest!

Calculations (Solution 2)

Weekend Days

- 600 town visitors * 50% stay at our hotel = 300 weekend guests
- Revenues from individuals: 300 guests * 75% * \$150/room = \$33,750
- Revenues from groups: 300 guests * 25% * \$120/room = \$9,000
- Variable costs: 300 guests * \$30/occupied room/day = \$9,000
- Fixed costs = \$5,750/day
- Profit/weekend day = (\$33,750 + \$9,000) - \$9,000 - \$5,750 = \$28,000

Weekdays

- Hotel is 60% occupied on weekends with 300 guests = 500 rooms in hotel
- On weekdays, hotel is 75% occupied = 500 * 75% = 375 guests
- Revenues from individuals: 375 guests * 40% * \$150/room = \$22,500
- Revenues from groups: 375 guests * 60% * \$120/room = \$27,000
- Variable costs: 375 guests * \$30/occupied room/day = \$11,250
- Fixed costs = \$5,750/day
- Profit/weekday = (\$22,500 + \$27,000) - \$11,250 - \$5,750 = \$32,500

Total Profits

- $\Pi/\text{week} = 2(\$28,000) + 5(\$32,500) = \$218,500$
- $\Pi/\text{year} = 50\text{weeks} * \$218,500 = \$10,925,000$, round to \$11M
- Π over 3 years (assuming no growth/TVM) = 33M
- 20% ROI on 20M is 4M, so require \$12M Π over 3 years to meet goal

\$33M > \$12M, so invest!

Strategy Question

Now suppose that our client would like to increase revenues at the hotel. What would be some ways that they could accomplish this? Assume that costs are held constant.

- Increasing room price, perhaps positioning hotel as a luxury destination
- Partnering with a local convention center to attract large groups of guests, or building their own conference center
- Accommodating wedding receptions or other large social gatherings
- Conducting an advertising campaign - with a travel agency, online, on TV, etc.
- Expanding the hotel to accommodate more guests
- Opening a restaurant in the hotel, or adding additional dining options if interviewee assumed there was already a restaurant

Case Closing

Recommendation: They should summarize their profit calculations and other business considerations to come to the conclusion that it seems like a profitable venture.

Risks:

- National or global economic downturn could reduce business travel and tourism in general
- Competitors may buy the hotel if you do not, increasing competitors' power
- The hotel chain does not assimilate easily into the current hotel offerings

Next Steps:

- Begin more thorough due diligence process
- Determine sources of funding for the acquisition (issuing debt or equity)

ORGAN DONATIONS

Introduction (to be said by the Interviewer)

Challenge Level: Moderate
Case Type: Algebra Market Sizing
Industry: Consulting

Prompt: Your client is the New York State Health Commission. Recently, the state has experienced increasing demand for kidney donations, but there aren't enough available kidneys. They hired you to create a formula to determine how many people must register to hit their goal of 11,000 kidneys next year.

Background Information

There are only two ways that NY state can collect organs for donation from terminally ill / fatally injured citizens:

1. The injured person is a registered organ donor
2. The legal next-of-kin signs off on providing a donation(s)

Organ Donors must be 18+ years of age, in good health, and of the same blood type as those in need of the kidneys to donate

Assume that every adult has 2 kidneys

Assume the NY State Population = 20 million

Calculations (For Interviewer Only)

Formula Structure:

Total Kidneys Donated (KD) = (Kidneys from Registered (R) + Kidneys from Next-of-Kin (NK)) * 2 Kidneys per Donor

$R = \text{NY Population} * \% \text{Eligible} * \% \text{Registered}$

$NK = \text{NY Population} * \% \text{Eligible} * \% \text{Not Registered} * \% \text{Consenting}$

$KD = 11,000$ (This is the goal)

Putting that all together...

$11,000 = (\text{NY Population} * \% \text{Eligible} * \% \text{Registered} + \text{NY Population} * \% \text{Eligible} * \% \text{Not Registered} * \% \text{Consenting}) * 2$

NY Population = 20 M

$\% \text{Eligible} = .1\%$

$\% \text{Registered} = ?$

$\% \text{Not Registered} = (1 - \% \text{Registered})$

$\% \text{Consenting} = 10\%$

Calculations:

$11,000 = (20M * .1\% * \% \text{Registered} + 20M * .1\% * (1 - \% \text{Registered}) * 10\%) * 2$

$11,000 = (20,000R + 2,000 - 2,000R) * 2$

$11,000 = 36,000R + 4,000$

$7,000 = 36,000R$

$R = \sim 20\%$

NY State Needs to get 20% of its population to be registered as organ donors

Interview Follow-Up Questions

What are the various channels that the NY Health Commission can advertise the donor program to reach this 40% number? How might the different channels affect the number of people who register?

(NOT TO BE SAID: various channels such as the DMV, Print, TV/Radio, and Digital channels should be discussed. Additionally, each channel will target a different demographic. Certain demographics may be more likely to sign up, and certain demographics may have more healthy kidneys to donate.)

Closing

Recommendation: Based on the algebraic formula, it appears as though the NY HC needs to obtain a 40% registration rate to meet the demand for kidney donations in the state.

Next Steps: The interviewer should discuss next steps involving the marketing discussion previously held. Multiple conclusions can be drawn – look for critical thinking.

EMPIRE STATE BUILDING

Introduction (to be said by the Interviewer)

Challenge Level: Beginner
Case Type: Market Sizing
Industry: Various

Prompt: How many stacked pieces of paper do you need to reach the top of the Empire State Building?

Calculations

1. Estimate how tall the Empire State building is.
 - a. Start by estimating the number of floors (there are 100 floors but the estimate doesn't need to be exact. It must simply be reasonable).
2. Estimate height of the building – Be prepared to talk on the rationale behind your numbers
 - a. Can do this through the estimate of the number of floors
 - b. Ex. If she says 100 floors, each floor can be approximately 3 meters tall. The estimate can then be based on the average height of a floor.
 - c. Answer: 100 floors x 3 meters per floor = 300 meters tall.
3. Pieces of paper stacked together – how much do you need?
 - a. Student: 500 pages per 10 cm
 - b. Tip-Pick easy numbers to work with to get to your rationale. So if a textbook is usually 500 pages and 10 cm, then 500 pages = 10 cm, then 5, 000 pages = 1 m.

Final Set of Numbers and Calculations

Number of pieces of paper for the entire building:

- a. 5000 pages = 1 meter and there are 300 meters in the building (according to the sample estimate), 50m000 pages for 10 meters and 500,000 pages for 100 meters.
- b. $500,000 \times 3 = 1,500,000$ pages stacked together is what you'll need to reach the top of the Empire State building.

COCA-COLA CO. CASE INTERVIEW

Introduction (to be said by the Interviewer)

Challenge Level: Difficult
Case Type: M&A
Industry: Retail

Situation: Coke is evaluating two different possible acquisitions: Dasani bottled water and Minute Maid Orange Juice. With growth slowing in Coke's main cola product as consumers shift to healthier options, they are looking at adjacent product markets. How would you think about evaluating the two choices?

The Following Information Is Revealed Only If Asked By The Candidate

- Financials:
 - MM: \$10B of revenue (growing at 25% per year-outgrowing market); \$1B of Operating Profit
 - D: \$20B of revenue (growing at 5% per year); \$1B of Operating Profit
- Acquisition Price:
 - MM: \$10B
 - D: \$8B
- Industries:
 - MM: Orange Juice industry; \$30B of revenue; growing at 15% per year (faster than water); compete based on criteria listed below under Competitive Positioning
 - D: Bottled Water industry; \$200B of revenue; growing at 10% per year; compete based on criteria listed below under Competitive Positioning
- Competitive Positioning:
 - MM: Very well positioned on key customer importance criteria: brand, healthiness, taste; so-so positioning on less important customer criteria: price, packaging
 - D: Very well positioned on less important customer criteria: taste, brand; so-so positioning on key customer criteria: price, packaging, healthiness
- Strategic Fit:
 - MM: Cost synergies in distribution to grocery (\$100M per year)... NOT in marketing
 - D: Cost synergies in distribution to grocery AND convenience stores (\$200M per year).... NOT in marketing
- Multiples of Cash Flow:
 - Time = 0:
 - MM: $\$10B / (\$1B + 0.1B) = \sim 9x$
 - D: $\$8B / (\$1B + 0.2B) = \sim 7x$ (on the surface, Dasani price looks more reasonable)
- Two Years Out:
 - MM: \$10B of revs grows to $\sim \$15B$; assume base case cash flow grows by $\sim 30\%$
 $\$1.60B$ PP of $\$10B / (\$1.6B + 0.1B)M = 5.8x$ or $\sim 6x$
 - D: \$20B of revs grows to $\sim \$22B$ ($\sim 5\%$ per year); assume base case cash flow grows by $\sim 10\%$ per year....
 $\$1.0B$ grows to $\sim \$1.2B$ PP of $\$8B / (\$1.2B + 0.2B)M = 5.7x$ or $\sim 6x$

Final Answer

- While lower purchase price and higher synergies make Dasani seem like the better acquisition on the surface, a closer inspection reveals that Minute Maid looks better. After two years of higher growth, the acquisition multiples are a wash.
- Further, competitive positioning reveals that Minute Maid is far better positioned. The firm is better positioned vs key customer purchase criteria. As such, the firm will likely gain market share vs their industry. But even using a conservative industry average growth rate, and assuming some "operating leverage" (profit margins grow faster than revenues if fixed costs in cost structure), the acquisition multiple math above holds true is a wash.
- Also, note that MM represents \$10B of a \$30B industry, thus representing an industry leader in a high-growth category. Dasani represents \$20B of a \$200B industry, thus representing a weak follower in a slower growth category.
- Therefore, Coke should buy Minute Maid!!

BACK BAY BATTERY CASE INTERVIEW

Introduction (to be said by the Interviewer)

Challenge Level: Difficult
Case Type: Profitability, M&A
Industry: Retail

Prompt: The year is 2013, our client is Back Bay Battery, a leading manufacturer in Li-Ion battery of various sizes, such as the regular AA and AAA batteries. They have been experiencing a decline in revenue and profitability, and had hired you to help it reach its goal of \$5MM in profit.

Background Information

1. The Industry
 - The Li-Ion industry is experiencing rapid decline
 - New superior product: "Super-Ion" emerging
2. The Competitors
 - Three other main competitors with similar market share
 - All competitors offer very similar product since 1996
3. The Company (FY13 Forecast)
 - Revenue Structure

	Price/Unit	Volume (MM)
Regular	\$0.50	10
Rechargeable	\$1.25	8

- Cost Structure

Variable	Fixed	
	Cost/Unit	Amount (MM)
Regular	\$0.30 R&D	5
Rechargeable	\$0.45 Other	3

Questions

1. What is the profit figure in FY13?

Profit figure: $\$15\text{MM} - \$14.6\text{MM} = \$0.4\text{MM}$

Total revenue: $\$15\text{MM}$

- Regular: $\$0.5 * 10\text{MM} = \5MM
- Rechargeable: $\$1.25 * 8\text{MM} = \12MM

Total cost: $\$12\text{MM}$

- Total fixed cost: $\$5\text{MM} + \$1\text{MM} = \$6\text{MM}$
- Total variable cost: $\$6\text{MM}$
 - o Regular: $\$0.3 * 10\text{MM} = \3MM
 - o Rechargeable: $\$0.45 * 6\text{MM} = \3.6MM

2. To reach \$5MM in profit, how many more batteries does the client needs to sell?

In order to reach \$5MM in profit, the margins coming from both batteries need to cover \$13MM (\$5MM profit + \$8MM fixed cost)

Which product to focus on?

- Rechargeable, because it makes up $12/15=80\%$ of the total revenue

How many more rechargeable batteries (in MMs)?

- Regular stays the same: \$5MM in revenue, \$2MM in profit
- Rechargeable needed to sell: $(13MM-2MM)/(\$0.45/Unit) \approx 24MM$ units

Is it possible?

- No, it's triple the current demand

Propose acquiring Fenway & Co

The team propose to acquire Fenway & Co, a leading manufacturer in Super-Ion batteries for \$8 MM.

- Revenue '13 Forecast: \$5MM in stand-alone revenue from regular super-ion batteries
- Cost' 13 Forecast: \$1MM in fixed cost every year; profit margin is 60%
- Synergies: \$2MM in revenue synergies; \$2MM in R&D synergies
- Cannibalization: \$1MM in cannibalization (revenue)

3. How much profit does Kenmore generate? What's the breakeven year?

- Profit= Revenue (\$5MM)*profit margin (60%) - fixed cost (\$1MM)= \$2MM
- Breakeven= Purchase price(\$8MM)/yearly profit(\$2MM) = 4 years

4. How will the combined company had perform in 2013?

Total Revenue:

- \$15MM (Back Bay)+ \$5MM (Kenmore) + \$2MM (synergy) -\$1MM (cannibalization)=\$21M

Total Cost:

- Variable Cost: \$6.6M (Back Bay) + \$2M(Kenmore) = \$8.6M
- Fixed cost: \$8MM(Back bay) + \$1MM(Kenmore) - \$2M(synergy)=\$7MM
- Variable + Fixed = 15.6M

Profit: \$21MM - \$15.6M = \$5.4MM (above goal!)

Closing

1. Recommendation

- We recommend to move forward and acquire Kenmore & Co, with combined operations we can expect FY13 to fulfill the request of our client with \$5.4MM in profit.

2. Risks

- Inaccurate forecast
- Costly integration
- Shifting market demand on Super-Ion

3. Next Steps

- Develop rechargeable batteries for Super-Ion
- Further explore potential synergies
- Start funding raising process

WISCONSIN OPTICAL DEPARTMENT

Introduction (to be said by the Interviewer)

Challenge Level: Moderate**Case Type:** Operations/Pricing Strategy**Industry:** Retail

Prompt: It is the 1980's. Your client is a discount department store with locations throughout the upper Midwest. The stores are known for having bi-weekly sales and having an optical center where glasses can be ordered for pickup one week later. Department stores West of the Rocky Mountains are starting to offer optical pick-up one hour after ordering by creating the lenses in-store. Should your client open another lab - it currently owns one - to make glasses? If so, where?

Background Information

1. Your client's ordering process
 - The orders are placed in-store on an extremely modern system. From here the order is added to a queue within your client's one lab where glasses are made in Green Bay, WI.
 - After glasses are made, they are shipped every day / over-night to the stores for pick-up
 - The bottle neck in the process is the time orders wait in the queue
2. Information on new lab
 - Building a new lab would cost at least \$10 million in upfront capital before training workers and installing computer systems
 - A 2nd lab could get the pick-up wait time down to 4 days at the absolute earliest
 - Purchasing small eye glass machines for each store has \$40 million of upfront costs and may jeopardize glasses quality. Plus the old lab will have to be closed
3. Competition's ordering process
 - Orders are made in store and then instantly made in the back using smaller, less detailed machines
 - These machines are almost universally found in suburban and urban malls
4. Sales
 - 80% of all glasses are ordered on sale every other week
 - These sales come in the form of in-store promotion and coupons in the mail
 - Spreading out the orders can result in customers receiving their glasses in 1-2 days (this slight delay is fine for Midwesterners who generally live slower lives)
 - (The interviewer should understand that completely eliminating discounts will destroy value, like what happened to JCPenny's)
 - (NOT TO BE SAID EXPLICITLY: This is causing the long queue times, which is the bottle neck. Distribution is not the issue, and another plant is an unnecessary expense.)

Closing

1. Recommendation: Based on the findings from the case, the client should not open up another eye glass-producing laboratory. Rather, the client should eliminate the heavy, bi-weekly, sales on eye glasses to smooth out the demand and reduce the bottleneck (queue times).
2. Risks:
 - Big chains like Target and Walmart can threaten this business model with "every day low prices"
 - If the customers perceive the new stable sales structure to be a worse deal than before, they will stop buying glasses
3. Next Steps:
 - Develop a form of sales / promotion that promotes less cyclical purchases and test the various options at various stores
 - Advertise the faster pick-up times to consumers

RESOURCES | CASE COMPETITIONS

In addition to the practice cases above, there are many additional resources you can take advantage of to fine tune your case interview skills.

Practice

- The Boston University Consulting Group (BUCG) hosts Mock Case Interview's on Friday's. The times vary weekly, so for more information please contact [BUCG](#).
- Questrom Career Services provides access to sample cases via [Marc Cosentino's interactive website](#), CQ Interactive, for practice. The username is yourBU email and the password iscasequestions40.

Additional Guides with Sample Cases and other Online Resources:

[UDC Case Resources](#)

[Boston University Consulting Group \(BUCG\)](#)

[Cornell](#)

[Wharton](#)

[Stanford](#)

[Vault Case Interview Guide](#)

[Vault & Rocket Blocks "Mastering the Case Interview" 30 Minute Recorded Webinar](#)

Books:

[Case in Point](#) by Marc P. Cosentino

[Case Interview Secrets](#) by Victor Cheng

[Ace the Case](#)

Sample List of Case Competitions

HARVARD: GLOBAL CASE COMPETITION

About: It's not only an event where you can showcase your financial skills to the entire world, but also a fantastic opportunity to meet the world's brightest minds, learn from industry professionals, and expand your network by connecting with people from 6 continents.

Dates: Annually (in April) | **Requirements:** 2-5 students per team, fee and [online registration](#)

MCGILL MANAGEMENT INTERNATIONAL CASE COMPETITION

About: This world class competition highlights the strategic challenges and managerial dilemmas faced by global business leaders.

Competing teams from premier business schools work under pressure to solve a real business problem, using simulated business conditions such as time-critical deadlines and incomplete information, to formulate workable, action-oriented recommendations.

Dates: Annually | **Requirements:** 4 students per team, and a school advisor to accompany, and must [register online](#) but no fee.

MARSHALL INTERNATIONAL CASE COMPETITION (USC)

About: This world class competition highlights the strategic challenges and managerial dilemmas faced by global business leaders.

Competing teams from premier business schools work under pressure to solve a real business problem, using simulated business conditions such as time-critical deadlines and incomplete information, to formulate workable, action-oriented recommendations.

Dates: Annually (in February) | **Requirements:** 4 students per team and complete [online questionnaire](#) available in June

ELLER ETHICS CASE COMPETITION (UNIVERSITY OF ARIZONA)

About: The competition will expose students to a thought provoking business ethics case that they could face in their professional careers.

Student teams will collaboratively analyze, present, and respond to questions posed by a panel of judges. Students will compete with teams from various business colleges from around the world. The experience promises to challenge students' moral reasoning, provide a wonderful networking opportunity, and in the end, raise students' awareness of the importance of corporate social responsibility.

Dates: End of October | **Requirements:** \$400 entry fee (includes 2 participating students and 1 faculty adviser) and [online registration](#).

THE NORTHEASTERN UNIVERSITY: INTERNATIONAL BUSINESS CASE COMPETITION (NU-CUIBE IB CASE COMPETITION)

About: The Northeastern University - Consortium of Undergraduate International Business Education International Business Case Competition, known in abbreviated form as the NU-CUIBE IB Case Competition, gives students the opportunity to showcase their international business knowledge, hone their analytical capabilities, sharpen critical thinking, utilize presentation skills and apply what they have learned in the classroom in an intellectually demanding and highly competitive setting.

Dates: End of October | **Requirements:** 4 students per team and [online registration](#).