## Guidelines

Welcome to the first step of the recruitment process at Bain & Company, Inc. You are about to get a firsthand experience on practical Bain casework. The test is based on modified Bain cases and is designed to assess your approach to problem solving using strategic thinking and deductive reasoning. At Bain, we are more interested in 'how you think' rather than 'what you've learnt'. We work on diverse complex situations spanning across multiple industries and sectors, but present only concise, relevant information to our clients. In order to do the same, we understand the data, interpret the insights, and finally present what we infer in an organized manner. This test is designed to simulate the same experience for you!

While attempting this paper:

- ***Understand:*** Read the case studies carefully and identify the underlying problem. Make sure you do not leave out any inputs or key data points
- ***Interpret:*** Focus on details in the text and charts. Pay attention to the period of analyses and units used
- ***Structure your approach:*** Manage your time by answering the questions smartly. For instance, some questions do not require calculations but only involve simple elimination of choices. Always do a quick check before answering

## Instructions

- This booklet consists of 25 questions with multiple choices. Each question has a single correct answer
- It not necessary to answer all questions. You may attempt these questions according to your strengths and time. Read the question extremely well and attempt it only when you have fully understood what is to be done
- Use of any electronic devices (calculators, mobile phones, etc.) is strictly prohibited while answering the test

You have 60 minutes to complete the test. Keep your composure and best of luck!

# Case Study 1

Global Camera Co with significant presence in China is operating in a price sensitive market due to which its share price performance has slipped considerably into negative when compared to the broader peer set over the last five years. Shareholders are not pleased with the management and expect recovery.

Market for its core imaging business, which accounts for majority of its revenue, is shrinking with increasing technological advancements in smart phones. Profitability has been a concern for the company with operating margins continuously sliding.

Its current medium term strategy which requires the company to focus on growth with investments in adjacency businesses, has failed to deliver results. Co's current CEO is from its non-core business unit and hence has approached Bain to devise a near-term strategy to turnaround its share price performance.

Bain partners are of the view that it is Camera Co's conservative M&A strategy which resulted in its poor share price run. Bain ACs performed an analysis which suggested high co-relation between share price performance and profitability. Further analysis suggested innovation to be the key lever to drive profitability as customers easily shell out extra dollars when they see additional value in the product.

Q1. Which of the following most accurately describes why Camera Co. has approached Bain?

a. To help company innovate new products
b. To look for M&A opportunities
c. To analyze global camera market and deliver recommendations for next steps
d. To develop a strategy to improve shareholder returns

Q2. Which of the following most accurately describes Bain's initial hypothesis in addressing the client's problem?

a. More aggressive M&As
b. Optimize the product mix through innovation
c. Cost structure improvements
d. Increasing the Average Selling Price (ASP)

Q3. Bain approached the case with three sequential modules:

1. Identified the levers to drive share price
2. Collected KPI data for client co and its peers
3. Created a hypothesis to address the problem

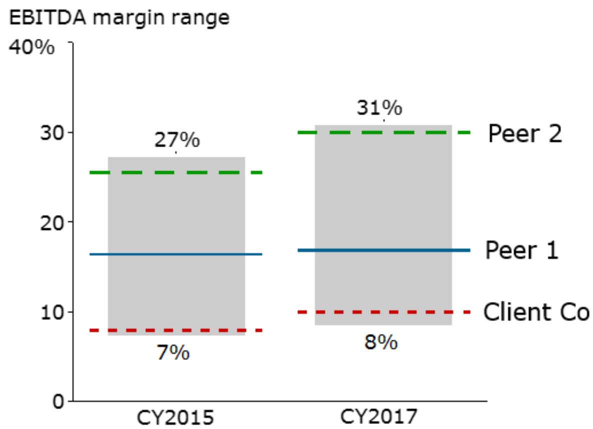
From the information above, what was the course of action according to you?

a. 1→2→3
b. 3→2→1
c. 3→1→2
d. 2→1→3

Q4. What according to you would be the closest adjacency for the client co?

a. Augmented reality
b. Industrial cameras
c. Smart phones
d. LED Panels

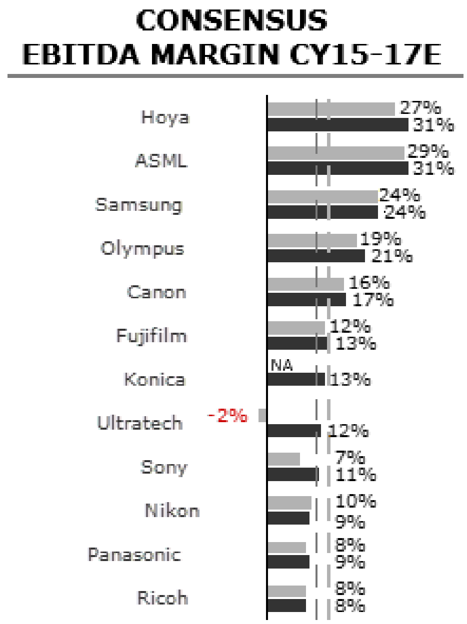
Since profitability was a concern, Bain benchmarked EBITDA margin of Client co against the peer set to understand where they stand. The chart below represents margin range of all companies in camera industry with three key players separately highlighted. 2015 represents the actual margins while 2017 refers to estimates based on analyst perception of companies' current strategy.




Q5. Which of the following most accurately describes the chart insight?

a. Peer 2 is the margin leader while Client Co is the laggard
b. Average profitability of the industry is estimated to improve but Client Co will continue to deliver bottom-quartile margin performance
c. No change in average profitability over time but anticipated improvement in Client Co's margins
d. Peer 1 is the median performer on margins

The chart below represents the EBITDA margin of individual companies. Lighter colored bar is for 2015 while the darker bar is for 2017E.



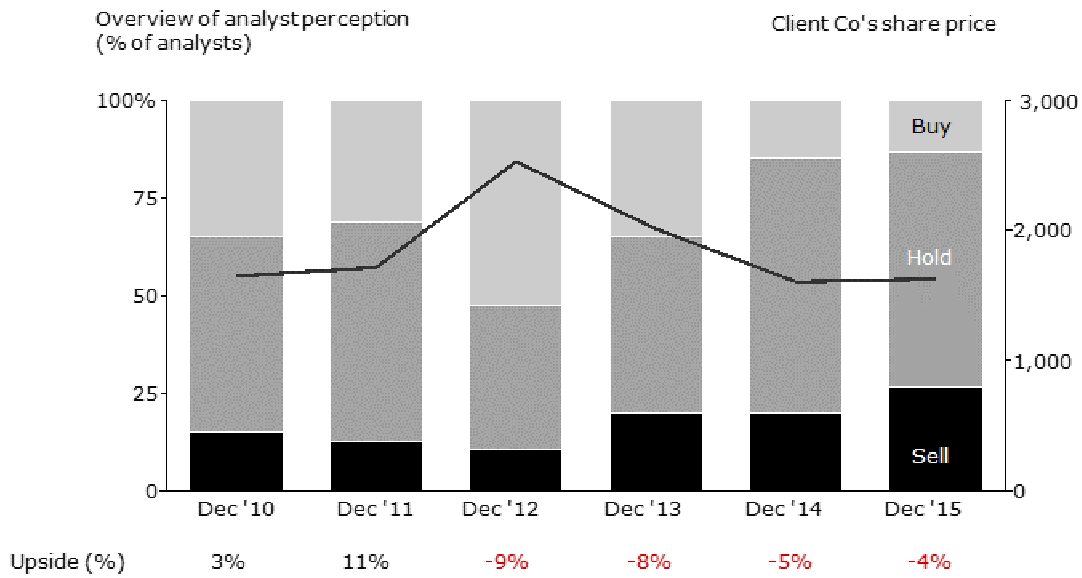

Q6. What is the **average** and **median** margin performance respectively for the years in consideration?

a. **2015:** 14, 12; **2017:** 17, 13
b. **2015**: 14, 13; **2017**: 17, 12
c. **2015**: 12, 14; **2017**: 13, 17
d. **2015**: 13, 17; **2017**: 12, 14

Q7. How is the margin spread expected to change over the next two years (refer chart above)?

a. Decrease
b. Increase
c. No change
d. Need more data points to be conclusive

The chart below describes how analyst perception of Client Co. has changed over time in terms of Buy, Sell and Hold ratings.




Q8. What do you infer from the chart above?

a. Share price decline in recent years indicate increase in Sell recommendations from the analysts
b. Analysts are positive on company's turnaround plan
c. Analysts are skeptical on camera co's current strategy and have lost some confidence in the stock over last few years
d. Analysts are considerably negative on the stock and believe camera company needs a total turnaround

After a series of further analysis, Bain reached conclusions that are different from its initial hypothesis and findings. Bain's final recommendations to the Camera co. were in-line with key analysts. Below is some commentary from the Camera Co's analyst reports.

***"Camera Co. is going to enhance its sales channels in emerging markets...we, however, think that the company should cut its numbers of new models and decrease related costs including R&D…"***

***"We believe that Camera Co. should focus on cost cutting and improving production efficiency in the camera business, instead of entering into new business areas, because Camera Co's risk tolerance should decline due to the structural decline of its core business."*** **– Analyst, September 2015**

Q9. Which of the following do you believe were Bain's recommendations to the Camera Co.?

1. Focus on expansion in emerging markets
2. Focus on cost savings
3. Focus on launching new models
4. Not enter into new business areas

From the information above, what do you think were Bain's final recommendations?

a. Only 2
b. 1 and 2
c. Only 4
d. 2 and 4

Case Study 2

MataSky is a large, national cable operator in the Bahamas. MataSky sells their services through a variety of retail and e-tail partners and all channel partners are treated equally with no performance incentives. Contracts with these partners were negotiated 5-10 years ago and lack aligned incentives.

The market has evolved over the last few years with new developments in the Consumer Electronics market such as high share of online sales. Despite this, offline sales remain important for MataSky.

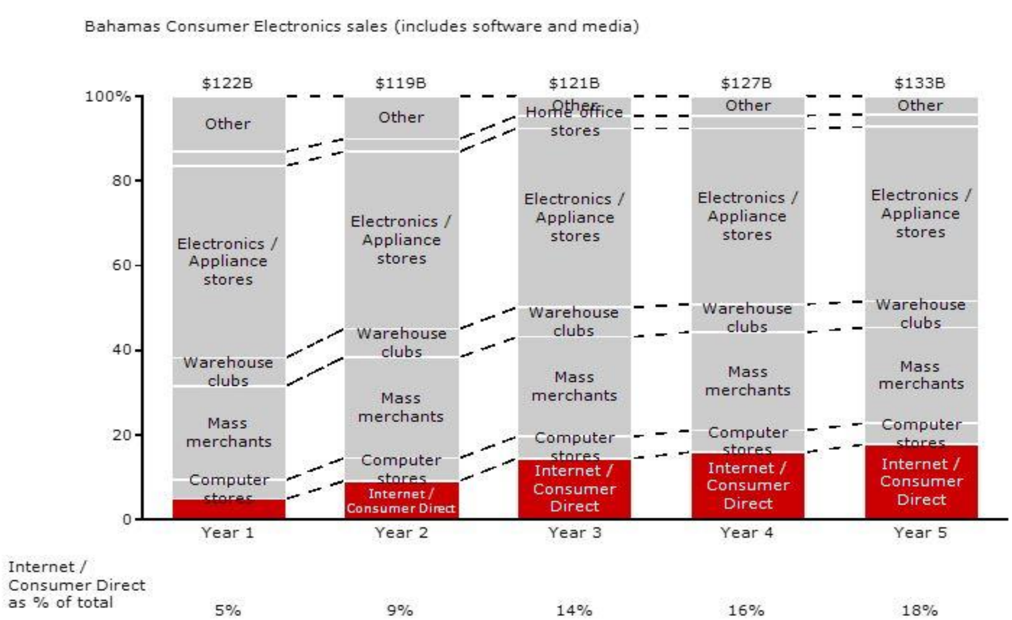
The company is working on a new IT system which will enable complex commissioning and a streamlined sales process, thereby presenting an opportunity for new contracts. The new management has engaged Bain to assist them to model a new commission structure based on cost of customer acquisition by partner and customer lifetime value (CLV).

Q1. Which of the following steps do you think Bain would have followed to arrive at a new commission structure?

1 Build fact base on the state Consumer Electronics, with focus on cable services
2 Interview current partners to identify best practices in contracts and relationships
3 Develop a new commission structure aligned with customer lifetime value (CLV)
4 Model the impact of new commissions

a. 1, 3 and 4
b. 2, 3 and 4
c. 1, 2 and 3
d. 1, 2, 3 and 4

MataSky expected Bain to analyze the Consumer Electronics sales to identify the fastest growing channel in the flat CE market. The chart below gives the contribution of different sales channels over time.



Q2. What is the cumulative annual growth rate (CAGR) of Internet/Consumer Direct channel during Yr. 1-5?

$$\text{CAGR} = \left\{\frac{\text{Ending Value}}{\text{Beginning Value}}\right\}^{\left\{\frac{1}{\text{Number of Years}}\right\}} -1$$

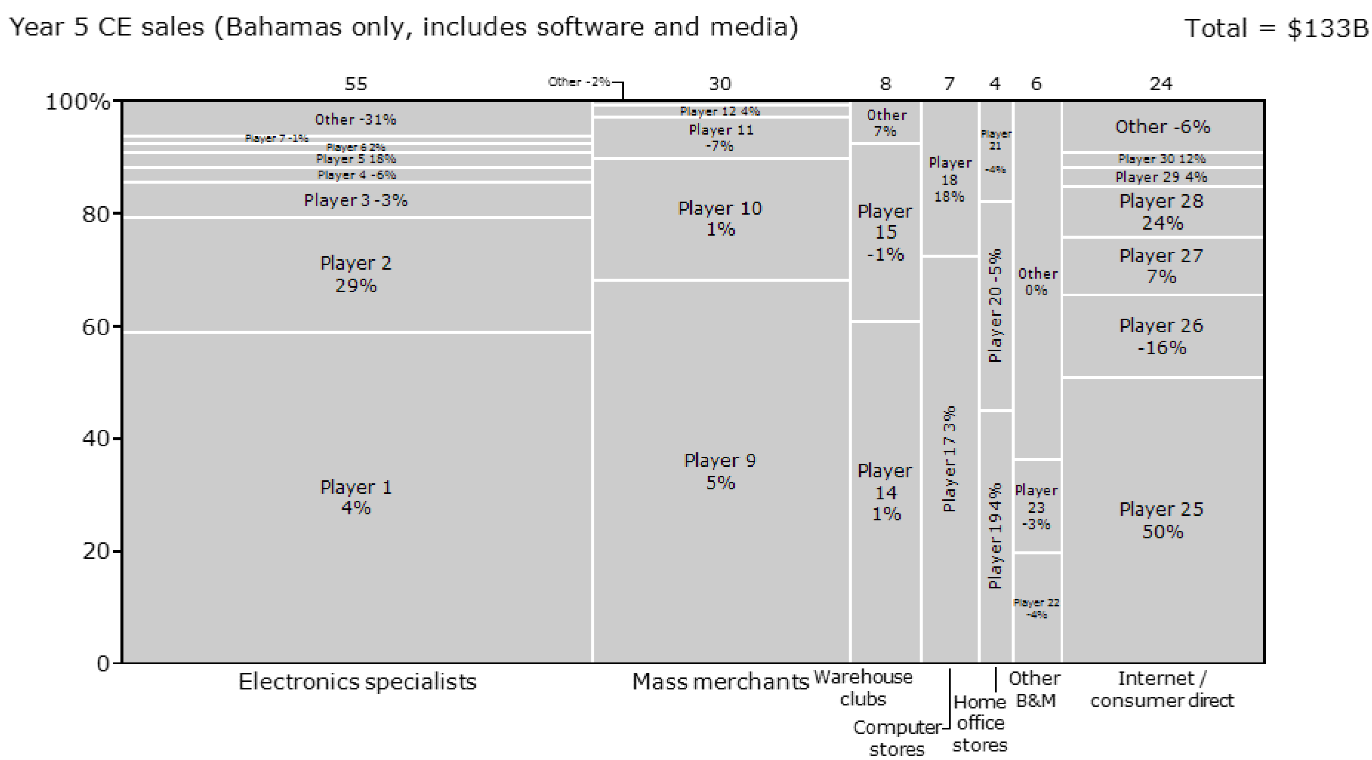
a. ~45%
b. ~40%
c. ~35%
d. ~30%

Q3. What is the average approximate share of Top 3 sales channels during Yr. 3-5?

a. 85%
b. 95%
c. 70%
d. Cannot be calculated

Through the below chart, Bain also analyzed key players in the various segments of Consumer Electronics retailing market.

***% on each segment label indicates Year 1-5 CAGR***

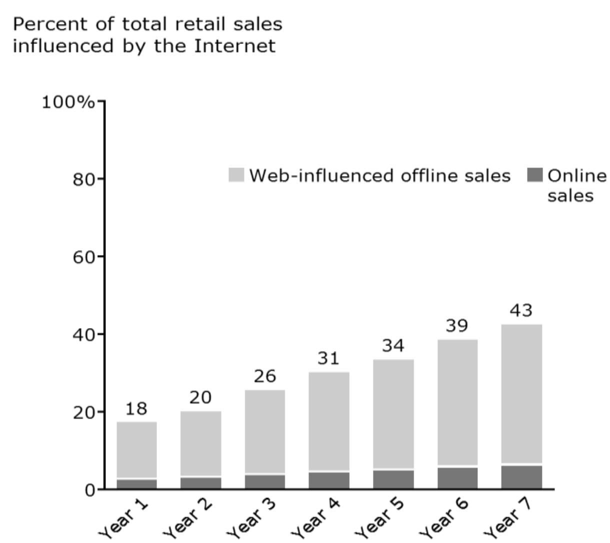


*Note: Players are listed in the decreasing order of their sales (Year 5) from bottom to top. E.g. Player 1 has the maximum sales in Electronics specialists segment in Year 5 and so has been listed at the bottom. Moreover, one player plays in only one segment.*

Q4. Which of the following statements can be accurately inferred from the above chart?

a. Electronics segment has more players than Warehouse clubs segment
b. Largest player (by sales) has presence in mass merchants segment
c. Fastest growing player (excluding 'Others') is in the Internet/Consumer Direct segment
d. None of the above

Industry trends suggest that offline presence will continue to be important due to showrooming and preference for offline TV buying. Consumers are influenced not just by the web for offline purchases but also by stores for online buys. The chart below indicates the percentage of total retail sales influenced by the Internet.




Q5. Retail sales are driven by both webrooming and actual online sales. What is the percentage increase in the total retail sales influenced by the Internet during Yr. 1-7?

a. 138.89%
b. 19.84%
c. 15.62%
d. Cannot be calculated

Moreover, MataSky did not have a partner portfolio strategy or segmentation, so Bain developed a high level segmentation as well as strategy and goals tailored for each segment to enable indirect channel partners to maximize the value they deliver.

Q6. What should be the course of action for Bain after refreshing partner portfolio strategy and segmentation assuming the target customers had already been identified by MataSky?

1. Develop right operating model with partners (e.g., 3PL)
2. Provide tools, training and execution support
3. Identify partners to add or remove
4. Develop compelling offers and aligned commissions
5. Evaluate and monitor partner performance

a. 1→3→4→2→5
b. 1→4→2→5→3
c. 3→1→4→2→5
d. None of the above

To be able to execute the course of action, MataSky needed Bain to identify key commission changes and list of improvement opportunities.

Q7. Which of the following do you believe should not be in the list of potential improvement opportunities?

a. Lower total cost to MataSky
b. Lower new customer churn
c. Higher volume by revising commission structure to increase reasons for sales representatives to push MataSky products
d. Lower total partner count driven by consolidation of point of sales

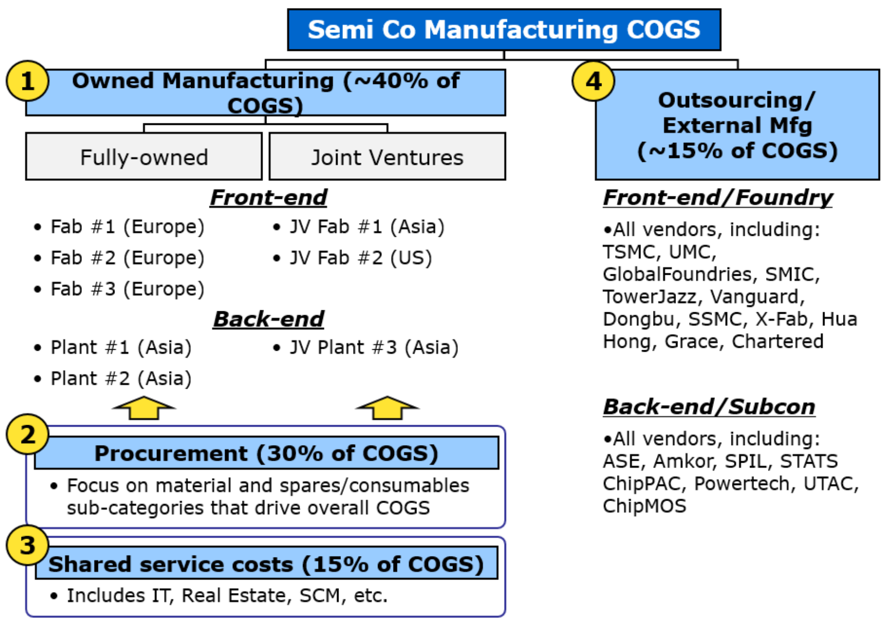
Q8. Which of the following recommendations does not make sense for MataSky?

a. Decentralize target setting activity for partners
b. Lower the base compensation to incentivize partners for good performance
c. High bundle bonuses to encourage partners to offer bundled services
d. Bonuses to partners for successful customer retention

<u>Case 3</u>

**Semi Co**. is a leading designer and manufacturer of integrated circuits. The company has been facing pressure to increase its gross margin to above peer average. As a result, Semi Co launched an organization-wide gross margin improvement initiative. Manufacturing operations were considered one of the key areas with cost reduction potential. Bain was hired to conduct a diagnostic on Semi Co's manufacturing costs, with a focus on establishing a cost baseline and identifying opportunities for futher improvement. Bain had come up with a 2 month long timeline that includes various analyses. Following is the framework that Bain identified for thorough diagnostic of manufacturing costs:

cost of goods selling




Q1. Which of the following information will be least useful to Bain in addressing the client's needs?

a. Market Overview
b. Benchmark data for peers
c. Organization Structure
d. Breakdown of COGS

Q2. Bain approached the case with four sequential modules:

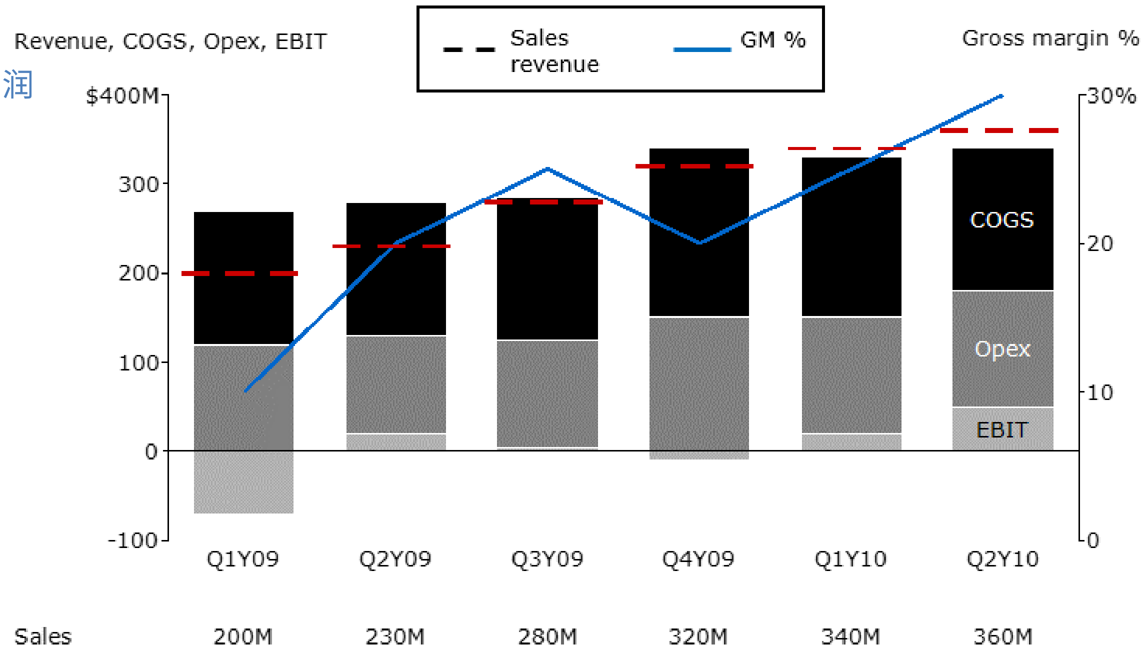
1. Identifying the industry and internal cost benchmarks for comparison and highlighting the opportunities where cost appear higher than baseline and/or the upward trend of costs is not justified
2. Identifying key activities and creating cost model framework
3. Aggregating costs into broader model and identifying the recent trends and impact on Gross Margin
4. Collecting historical and current cost data at most granular levels

Based on information above, identify the most logical sequence?

a. 2→4→1→3
b. 2→4→3→1
c. 4→1→3→2
d. 4→1→2→3

Bain identified the cost structure of Semi Co. to understand the trend in various cost heads over the past six quarters. Chart below is a representative of Semi Co's cost structure.

EBIT：息税前利润
Opex：运营支出




Q3. What is the CAGR for Sales during Q1'09-Q2'10?

$$\text{CAGR} = \left\{\frac{\text{Ending Value}}{\text{Beginning Value}}\right\}^{\left\{\frac{1}{\text{Number of Years}}\right\}} - 1$$

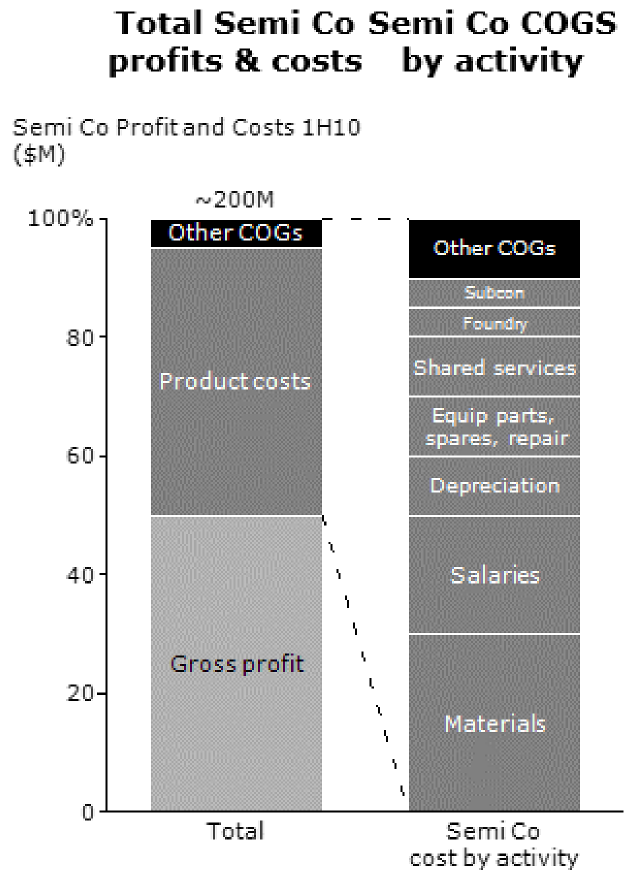
complex annual growth rate

a. 12.5%
b. 10.3%
c. 4.4%
d. 3.6%

Q4. Which quarter registered the maximum percentage increase in Sales from the previous quarter?

a. Q1Y10
b. Q4Y09
c. Q3Y09
d. Q2Y09

Below is the breakdown of Semi Co's cost structure, mainly production costs.




Q5. Estimate the value of Salaries cost based on the chart above.

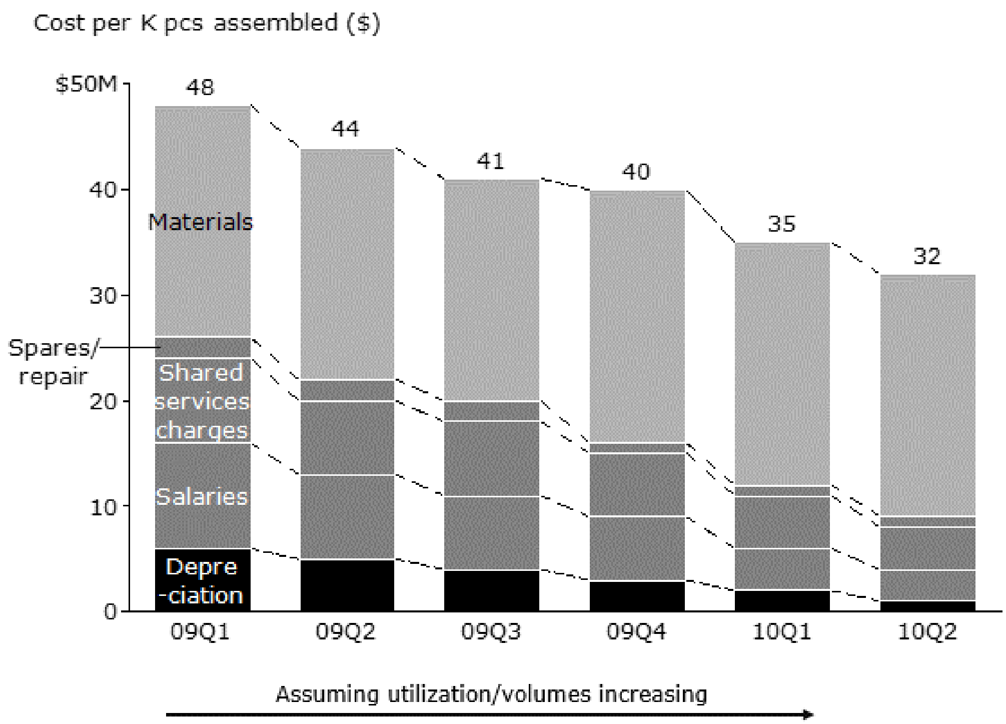
a. 30
b. 10
c. 20
d. 28

Q6. Choose the fixed costs among the following (choose the best option):

1. Salaries
2. Materials
3. Depreciation
4. Shared Services (Facilities, IT, HR)

a) 1, 2 and 3
b) 2, 3 and 4
c) 3 and 4
d) 1, 3 and 4

Bain did an analysis for costs per 1k pcs assembled to understand the impact from change in volume. Insight derived was that trend in costs less likely to be impacted by volume due to high materials cost.




Q7. Assuming utilization/volumes increasing, what key insight, with respect to the case, can be derived from the chart above?

a. Semi Co. can reduce their product cost per k units assembled to infinitesimally small by increasing their volumes infinitely
b. Increase in volumes is likely to result in a decrease in total product cost per k unit
c. Decrease in depreciation with increasing volume is one way to increase profits
d. In the next quarter (10Q3) per unit material cost is expected to increase if volumes increase

Q8. What could be the key-drivers for outsourcing part or all of the manufacturing process? (Choose the best option)

1. Lack of technology (process or package)
2. Excess demand
3. To have better control over manufacturing process
4. Better economics as compared to in-house manufacturing

a. 1 and 3
b. 2 and 3
c. 3
d. 1, 2 and 4