McKinsey Problem Solving Test

Practice Test A

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Practice Test Overview and Instructions

This practice test has been developed to provide a sample of the actual McKinsey Problem Solving Test used for selection purposes. This test assesses your ability to solve business problems using deductive, inductive, and quantitative reasoning. This practice test contains a total of 26 questions. The actual test contains 26 questions and you will be given 60 minutes to answer as many questions as possible.

You will be presented with three scenarios based on actual McKinsey client cases. Information related to each scenario will be shown in text, tables, and exhibits. This information is presented in shaded areas and is distributed in sections throughout the scenario. The questions ask you to find the most appropriate answer to the problem as described using only the information presented. You should select one and only one answer to any question.

While completing this practice test, do not use any electronic devices (e.g., calculator, computer) when performing calculations to answer the questions. Electronic devices will not be permitted to be used during the actual test administration. Also during the actual test administration, you may use all blank space in the test booklet as scratch paper to assist you in performing any calculations and recording any notes. No scratch paper will be allowed. Booklets will be destroyed after you complete the test and will not be used in any way to determine your test scores. Your final test score will be based on the number of questions you answer correctly.

The practice scenarios begin on the next page of this booklet. Only consider information contained within the scenario when determining your answer. Considering all information presented within the scenario is critical to answering questions correctly.

After you have completed the test, score your answers using the answer key located at the end of this booklet. Add the number of correct answers to determine your final total score.

Innovation Capital

The *Group of Eight* or *G8* is a group comprised of political representatives of eight of the world's largest eleven economies: United States, United Kingdom, Canada, Germany, France, Italy, Japan and Russia. The *G8* meet periodically to discuss issues of importance to member states and agree upon measures to address these issues.

The countries that comprise the *G8* have been experiencing slow economic growth in recent years, and this is an important topic to be discussed at the next meeting of *G8* Finance Ministers. In preparation for this meeting, a McKinsey team, working together with a group of external thought leaders and academics, are preparing a report on the importance of Innovation as a contributor to economic growth. The team intends to introduce a concept to the *G8* representatives known as 'Innovation Capital', which is the value of all innovation-related assets which contribute to growth in productivity in the economy.

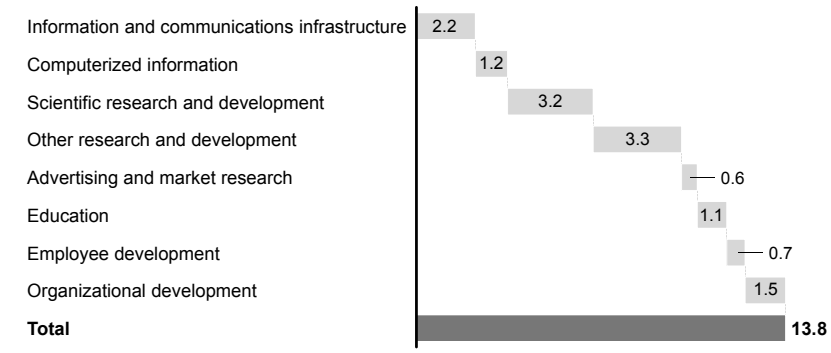
The team further defines three types of Innovation Capital:

- **Physical Capital:** Investments in information and communication equipment
- **Knowledge Capital:** Investments that build the intellectual property and brand value of a company or organization
- **Human Capital:** Investments that build individual or group abilities and skills within companies or organizations

Exhibit 1 shows the main components of Innovation Capital and their total value across 16 countries that the team has been studying, including the members of the *G8*.

Exhibit 1

Total innovation capital, (US$ trillions)



1. Which of the following MOST accurately describes the reason for the team's work in preparing for the *G8* meeting?

   A. The team has discovered a new economic measure known as Innovation Capital and wants to introduce it

   B. The team wants to explain how Innovation can drive economic growth

   C. The team wants to explain how Innovation can represent a large proportion of an economy's size

   D. The team wants to convince the group to invest more in Innovation Capital in the future

2. Which of the following analyses would be LEAST appropriate in better understanding the size of investments in Innovation Capital in the countries the team has been studying?

   A. Analysis of expenditure by organizations on training programs for their employees

   B. Analysis of expenditure by organizations on activities which build awareness of their aims and purpose

   C. Analysis of expenditure by organizations on networking and socialization meetings and events

   D. Analysis of expenditure by organizations on the management of their databases and information systems

3. Which of the following can be concluded based on the information provided in Exhibit 1 regarding the countries being studied?

   A. 45% of all Human Capital is invested in Organizational Development

   B. 51% of all Innovation Capital is Knowledge Capital

   C. More than 10% of Innovation Capital is invested in Computerized Information

   D. More than a quarter of Innovation Capital is Scientific Research & Development

4. If total Innovation Capital in Exhibit 1 were to grow by 5% per year in the future, which of the following would be the MINIMUM required annual growth in Human Capital that would see it represent more than half of total Innovation Capital in 10 years?

   A. 10%

   B. 15%

   C. 20%

   D. 25%

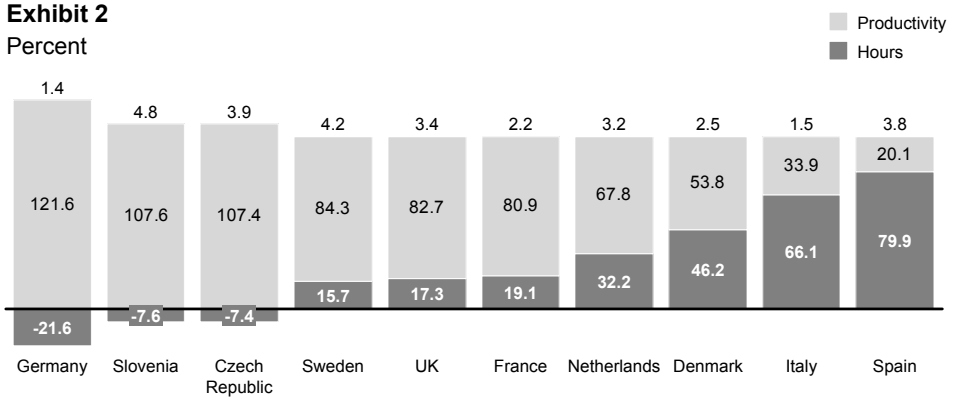
The team proceeds to examine changes in business sector growth in a number of European countries in recent years, that is, the change in the total value of goods and services produced by the business sectors in these countries.

Growth in the value of goods and services can be driven by two factors:

- **Hours:** Changes in the total hours worked can drive changes in the total goods and services produced
- **Productivity:** Even if the same number of hours have been worked, a more or less productive workforce can generate greater or lesser goods and services.

Exhibit 2 shows the average contribution of these two factors towards business sector growth in ten European countries over the last 12 years. Average annual business sector growth is given at the top of each bar. Within each bar, the light grey portion represents the proportion of this growth driven by changes in Productivity, while the dark grey portion represents the proportion of this growth driven by changes in Hours.

Exhibit 2
Percent



5. Which of the following statements, if true, would BEST explain why the information in Exhibit 2 is important for the team?

   A. Most of the countries in Exhibit 2 have experienced negative economic growth in the last 2 years

   B. In most countries, the business sector is the biggest contributor towards Innovation Capital

   C. Growth in Hours is mostly driven by growth in the size of the working population

   D. Growth in Productivity is mostly driven by growth in Innovation

6. Which of the following statements is TRUE based on the information provided in Exhibit 2?

   A. Hours grew by 24% across all ten countries over the last 12 years

   B. Slovenia had the greatest growth in Productivity over the last 12 years

   C. Spain had the least growth in Productivity over the last 12 years

   D. Germany had the least growth in Hours over the last 12 years

7. To the nearest tenth of a percentage point, what is the difference between Germany's and Spain's average annual business sector growth due to productivity over the last 12 years?

   A. 0.1 percentage points

   B. 0.5 percentage points

   C. 0.9 percentage points

   D. 1.3 percentage points

8. Which of the following, if true, LEAST explains the data for Slovenia and Czech Republic in Exhibit 2?

   A. Over the last 20 years, the average age of the population in these countries has been steadily increasing

   B. Prior to the period in Exhibit 2, these countries were emerging from Communist economies with comparatively poor infrastructure and productivity

   C. Net migration into these countries has been negative over the last 12 years

   D. Changes in employment laws in these countries have led to greater flexibility for employers in setting working hours for their employees

In preparing further for the *G8* meeting, the team decides that it would be a good idea to use some specific examples of recent major innovations to help better explain the importance of Innovation Capital.

A team member suggests using Apple's *iPod* music player as such an example. The team readily agrees to this suggestion. They believe that the development of the *iPod* not only illustrates all three types of Innovation Capital, but it also shows how up-front investment in Innovation Capital can lead to follow-on advantages for the investor that accumulate over time.

9. Which of the following statements LEAST illustrates the Innovation Capital underlying the development of Apple's *iPod*?

   A. New software and technology was required to allow the distribution of music through online channels

   B. New pricing was negotiated with the music industry to encourage online music purchasing

   C. New design concepts were developed that gave the product an appealing look and feel

   D. A new way of working with the music industry was developed to allow rapid distribution of new music to *iPod* users

10. Which of the following analyses would BEST illustrate the team's beliefs regarding Apple's *iPod*?

   A. An analysis of the market share achieved by Apple for its products subsequent to the *iPod*

   B. An estimate of the size of the investment made by Apple in the development of the *iPod*

   C. An estimate of the profit margins of the music industry subsequent to the launch of the *iPod*

   D. An analysis of the reactions of technology experts to the *iPod* and subsequent Apple products

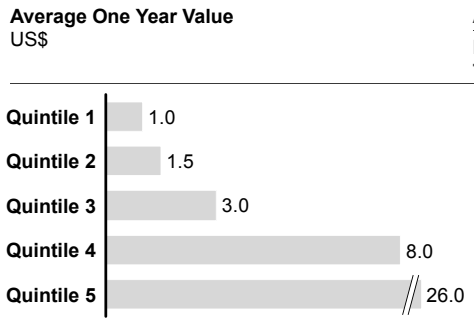
Marcadia

Marcadia is an online store which offers a wide range of goods to customers via mail order. *Marcadia* has been in existence for five years and has seen rapid growth in sales during this period, as more and more new customers signed up. However, recently *Marcadia*'s customer numbers have plateaued and this has resulted in slower sales and profit growth.

The Managing Director of *Marcadia* has engaged McKinsey to help her better understand the purchasing behavior of her customers. She believes that a better understanding of customer purchasing can lead to more targeted and successful marketing. She tells the team: 'I'm sure that our most valuable customers have certain purchasing behaviors that we can identify. If we can encourage more of our customers to adopt those behaviors, we can make them more valuable to us and this can inject a new source of growth into our business.'

Exhibit 3 shows some data which the team has collected regarding a sample of 500,000 *Marcadia* customers who signed up in the last calendar year. The customers are split into quintiles according to their one year customer value, from lowest to highest. 'One year customer value' is defined as the profit made by *Marcadia* on purchases made by a customer in their first year since signing up. Also presented is data on purchasing by customers in each quintile in their first 90 days since signing up, namely the average number of purchase transactions and the total revenue received by *Marcadia* from those transactions.

Exhibit 3



	Average after 90 days	
	Number of Transactions	Total Revenue
Quintile 1	1.1	$79
Quintile 2	1.3	$111
Quintile 3	1.5	$120
Quintile 4	2.6	$252
Quintile 5	5.7	$490

11. Which of the following statements BEST describes why the Managing Director of *Marcadia* has engaged McKinsey?

    A. She believes that *Marcadia* can become better at identifying customers who stop making purchases

    B. She believes that *Marcadia* can become better at identifying ways to encourage customers to spend more

    C. She believes that, by focusing on the customers of greatest value, *Marcadia* can drive renewed growth in their business

    D. She believes that *Marcadia* can predict the purchasing behavior of its customers better

12. Which of the following CANNOT be concluded from the information presented in Exhibit 3 regarding the sample of customers analyzed?

    A. Purchasing by customers in their first 90 days is an indicator of their value to *Marcadia* in their first year

    B. Quintile 1 are the customers with the lowest profit margin for *Marcadia*

    C. The average customer makes between 2 and 3 transactions in the first 90 days since signing up

    D. The average one year customer value is $7.90

13. What is the correct ranking of the five quintiles in Exhibit 3 according to the average transaction revenue, from lowest to highest?

    A. 1, 2, 4, 3, 5

    B. 1, 2, 3, 4, 5

    C. 1, 3, 2, 4, 5

    D. 1, 3, 2, 5, 4

14. If *Marcadia* had driven higher purchasing from the new customers in Exhibit 3 so that the one year value of customers in Quintiles 1 thru 4 were each to increase to the next highest quintile, how much greater would *Marcadia*'s total one year customer value have been?

    A. $250,000

    B. $650,000

    C. $2.5 million

    D. $6.5 million

The team designs an email marketing pilot for 100,000 new customers who have made at least one purchase since joining. In this pilot, these new customers are split into two equal groups: a 'pilot' group and a 'control' group. The pilot group receives a specially designed email to encourage further purchasing, while the control group does not receive the email. All emails are sent to the pilot group at the same time, and the emails are designed differently according to the demographics of the customer and his or her prior purchasing behavior.

Following the pilot, the team constructs Exhibit 4. This shows the 'lift' in the purchasing behavior of the pilot group compared to the control group after the emails were sent to the pilot group. Horizontally, the information is divided according to how long ago the customer made their first *Marcadia* transaction, measured from the time the emails were sent to the pilot group. Vertically, the information is divided according to what kind of product was purchased in the customer's first *Marcadia* transaction. Within each box, the upper left portion shows the lift in the number of transactions, while the lower right portion shows the lift in the number of customers who made transactions. All data in Exhibit 4 is in percentage points.

Exhibit 4

% lift in number of transactions

% lift in number of customers making transactions

	Weeks since 1st transaction				
	0 - 2	2 - 4	4 - 6	6 - 8	**Total**
Electronics	1.6 / 3.5	7.0 / 6.4	-1.2 / 1.8	6.9 / 9.0	3.8 / 5.0
Clothing/Apparel	3.0 / 2.3	-0.3 / 0.3	-6.0 / -3.7	-6.6 / 0.1	-1.7 / 0.0
Other	3.7 / 2.2	6.0 / 4.4	-2.4 / 0.4	-3.7 / 0.5	1.5 / 1.9
Total	2.0 / 2.0	3.1 / 2.8	-2.4 / -0.4	-0.8 / 2.4	0.9 / 1.7

15. When comparing the pilot group to the control group, which of the following CAN be determined from the information provided in Exhibit 4 for customers who purchased Electronics in their first transaction?

    A. Percentage difference in average number of transactions per customer

    B. Difference in number of customers making transactions

    C. Two week time segment which had the greatest difference in number of transactions

    D. Percentage of total lift in number of transactions represented by each two week time segment

16. If 10% of customers in the control group made transactions during the pilot, how many of the customers in the pilot group made transactions during the pilot?

    A. 5,085

    B. 5,850

    C. 10,170

    D. 11,700

17. Which of the following CANNOT be concluded from the information presented in Exhibit 4?

    A. The pilot had no overall impact on the likelihood of making further transactions among customers whose first purchase was in Clothing/ Apparel

    B. The pilot had a positive impact on the number of transactions per customer for customers who made their first transaction 4-6 weeks before emails were sent

    C. The pilot had greatest impact among customers whose first transaction was in Electronics

    D. Among customers whose first transaction was in 'Other', the pilot had greatest impact among those whose first transaction was more recent

18. Which of the following data from the pilot period would be LEAST useful to the team in further investigating the impact of the pilot on *Marcadia*'s business?

    A. Average transaction value for pilot group and control group customers

    B. Percentage of pilot group emails that were not delivered and bounced back

    C. Breakdown of data in 'Other' category to further levels of detail

    D. Breakdown of two week time periods into weekly time periods

The team calls a meeting with the Managing Director of *Marcadia* to update her on the results of the pilot. While presenting the results of the pilot, one of the team members reminds the Managing Director that all new customers may have received emails from *Marcadia* which were not related to the pilot.

19. Which of the following is MOST LIKELY to be the reason for the statement by the team member to the Managing Director?

    A. The Managing Director is concerned that customers in the control group were neglected

    B. The team are concerned about how well *Marcadia*'s staff executed the pilot

    C. Customers who receive too many emails from the same company become less likely to open and read them

    D. Customers may discover that they were not selected for the pilot and may be unhappy about this

Way Forward Greater London Area (WFGLA)

Way Forward (WF) is a non-profit organization that consists of more than 50 local offices in the United Kingdom. Way Forward Greater London (WFGLA) is one of these local offices based in the Greater London Area, a metropolitan area surrounding the city of London. Typically the local offices work together with private and social sector organizations to pool efforts in fundraising campaigns. These campaigns typically address pressing community issues, usually around education, income or health. WF first seeks to educate the population about these campaigns, then solicits donations.

Currently, there is an economic downturn in the United Kingdom. This presents a challenge for WFGLA, because donations are decreasing when community need is at its highest. The President of WFGLA has reached out to McKinsey to ask for support. He tells the team: "I need your help on improving our campaign effectiveness, which we define as the number of pounds donated per pound spent on the campaign. We really need to focus on increasing donations in these times!"

A campaign is usually organized by a group of people called a "campaign cabinet". This group includes WFGLA staff, as well as volunteers from the general public; the actual campaign work is conducted by volunteers.

20. Given the aims of the President of WFGLA, which would be the LEAST relevant question for the team to answer?

    A) How can WFGLA get better at targeting people who are likely to donate?

    B) How can WFGLA engage with people in ways that are more likely to result in donations?

    C) How can WFGLA contact and communicate with their donors in a lower cost way?

    D) How can WFGLA improve the execution of campaigns by the campaign cabinet?

WFGLA

21. Which of the following pieces of information would be LEAST helpful in better understanding the current WFGLA situation?

    A) Total amount of donations, in British pounds, collected by other WF offices across the U.K.

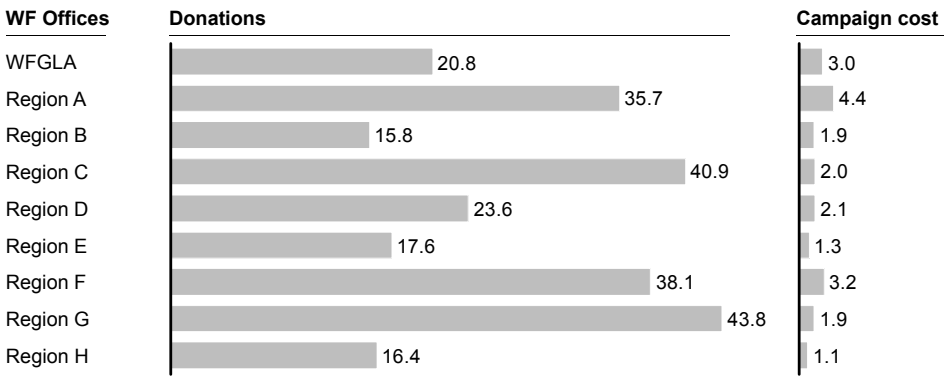
    B) Comparison of donations made to WFGLA by one-time donors versus regular donors over the past 5 years

    C) Market research on the public awareness generated by WFGLA campaigns over the past 5 years

    D) Comparison of campaign effectiveness with other local WF offices

The team gathers more data on WFGLA and on other WF offices. Exhibit 5 shows the total donations and total campaign costs in million British pounds (£) for various WF offices last year.

Exhibit 5



22. How should Regions A to E in Exhibit 5 be ranked according to their campaign effectiveness from highest to lowest?

    A) C, E, D, B, A

    B) C, A, D, E, B

    C) C, E, D, A, B

    D) A, B, D, E, C

23. Assuming WFGLA could reach the average campaign effectiveness of all other regions included on Exhibit 5, by what percentage could their current effectiveness be increased?

A) 81%

B) 87%

C) 94%

D) 101%

One potential opportunity the team explores is a segmentation of potential donors according to the type of work they do, with the aim of taking different fundraising approaches for employees working in different occupations. The team identifies 3 segments of workers:

- **Blue Collar:** Employees doing mostly manual work
- **White Collar:** Employees doing mainly office work
- **Executive:** Employees who mostly have college or advanced degrees, and who typically work as senior managers in business

Exhibit 6 shows the number of employees in thousands in each segment in the Greater London Area. Employees are categorized by the size of the company they work for, as well as their level of contact with WFGLA so far, or 'relationship intensity'. The goal is to subsequently increase the relationship intensity for each segment, so that each segment moves closer to the 'frequent contact' group.

Exhibit 6

	Relationship intensity								
	No contact			Little contact			Frequent contact		
	Blue collar	White collar	Executive	Blue collar	White collar	Executive	Blue collar	White collar	Executive
Small	86.1	86.5	45.1	2.1	9.9	5.1	1.4	2.9	2.0
Medium	79.6	99.6	62.0	15.8	23.4	13.7	3.8	3.2	3.4
Large	50.0	137.5	40.0	125.6	318.7	100.4	20.7	14.9	14.1

WFGLA

24. Which is most likely to be TRUE based on the information given on Exhibit 6?

    A) WFGLA has had contact with slightly more than 50% of all employees in the Greater London Area

    B) Small companies have received the least attention by WFGLA in the past

    C) The biggest proportion of the total amount donated has come from employees with frequent contact

    D) The biggest opportunity to increase donations is to get in touch with those employees who work for large companies WFGLA is not in contact with yet

The team explores the donation potential for each of the segments according to the company size. The team concludes that a medium Blue Collar company employee with frequent contact currently donates double the amount of a medium Blue Collar company employee with little contact. They also determine that, if targeted with the right approach, all employees of medium Blue Collar companies would increase their donation by £50 per person per year. This will include employees who do not have any current contact with WFGLA, whom do NOT make any donations currently.

25. If WFGLA implements the targeted approach, the expected total donation estimate for Blue Collar employees in medium companies will be £6.13 million. What is the current annual donation of a Blue Collar employee with frequent contact in a medium company?

    A) £50

    B) £100

    C) £150

    D) £200

26. In addition to donation potential, which would be the LEAST helpful information to consider when deciding the prioritization of the different employee segments to WFGLA?

    A) The amount of disposable income of the various employee segments

    B) The number of volunteer hours to be invested per segment to increase employees' relationship intensity to the next level

    C) The effectiveness of past campaigns with similar employee segments

    D) The additional budget amounts WFGLA would need per segment to increase employees' relationship intensity to the next level

Answer Key

Innovation Capital

1. B – The introductory paragraphs state that the team is preparing a report on the importance of innovation as a contributor to economic growth. Option B is the only statement that mentions the connection between innovation and economic growth.

2. C – Referring to the three types of Innovation Capital defined in the introductory paragraphs, Option C is the only option that does not fit into any of the three types. Option A is an educational activity which fits into Human Capital, Option B relates to building an organization's brand, which fits into Knowledge Capital. Option D is related to building the intellectual property of an organization, which also fits into Knowledge Capital.

3. A – Observing Exhibit 1 and relating the categories to the three types of Innovation Capital, it can be seen that the final three categories represent Human Capital, which totals $3.3 trillion. Of this, Organizational Development represents $1.5 trillion, which is 45% of $3.3 trillion. The 2nd thru 5th categories represent Knowledge Capital, which can be calculated as 60% of the total, rendering Option B incorrect. Option C is incorrect as Computerized Information represents 8.7% of the total. Option D is incorrect as Scientific Research and Development represents 23.2% of the total.

4. B – At 5% per year growth over 10 years, total Innovation Capital would grow to $22.5 trillion. At 10% per year growth, Human Capital would only grow to $8.6 trillion. However, at 15% per year growth, Human Capital would grow to $13.4 trillion, which would be more than half of total Innovation Capital.

5. D – The original aim of the team is to show how Innovation Capital can drive economic growth. From Exhibit 2, in most countries, business sector growth is driven mostly by improvements in productivity. Combining Option D with this observation establishes a direct link between Innovation Capital and business sector growth, hence economic growth.

Answers

6. B – Growth in productivity can be calculated by multiplying the overall growth rate by the proportion that is due to productivity. Observing that Slovenia has the highest overall growth rate, and the second highest proportion due to productivity is sufficient to establish that Option B is correct. Option A is incorrect as Hours growth can be calculated by multiplying overall growth by the proportion due to Hours and in every country this can be seen to be much less than 24%. Option C is incorrect as Italy has the least growth in productivity. Option D is incorrect as Slovenia has the least growth in Hours.

7. C – The two growth figures for Germany and Spain can be calculated by multiplying their total growth by the proportion due to Productivity. For Germany, this figure is 1.7% (= 1.4 x 121.6%). For Spain, this figure is 0.8% (=3.8 x 20.1%). Therefore the difference is 1.7 – 0.8 = 0.9 percentage points.

8. D – Option D states that employers have greater flexibility in setting working hours, which is inconsistent with the trend in these countries that working hours are declining. Option A would help explain the declining hours due to an ageing population. Option B would help explain the comparatively high growth rates due to emergence from stagnant economies. Option C would help explain declining hours due to more people exiting these countries than entering.

9. B – Referring to the three types of Innovation Capital in the introductory paragraphs, Option B is least likely to represent any of these types, as pricing of products is not in itself a new technology or intellectual property. Option A would represent either Physical Capital or Knowledge Capital. Option C would represent Knowledge Capital. Option D would be new organizational development which would represent Human Capital.

10. A – The team's belief is that investment in Innovation Capital can lead to follow-on advantages for the investor. In the case of the *iPod*, the investor is Apple. Of the options presented, only Option A might illustrate follow-on advantages for Apple through establishing improvements in market share for subsequent products. Option B refers only to investment, which would not necessarily establish an advantage for Apple. Option C looks at the entire music industry, which would not necessarily show an advantage for Apple. Option D refers to the opinion of technology experts, which may not reflect an advantage for Apple in the marketplace.

Marcadia

11. B – From the introductory paragraphs, the Managing Director is looking to find ways to encourage customers to adopt purchasing behaviors that more valuable customers are known to have. Given that a customer needs to make more purchases to become more valuable to *Marcadia*, this could be rephrased as 'encouraging customers to spend more'. Option A refers to customers who stop purchasing, who are not mentioned by the Managing Director. Option C refers to driving growth purely through focusing on customers of greatest value, which is also not a true reflection of the Managing Director's opinion. Option D refers to 'predicting' purchasing behavior, which is not mentioned by the Managing Director.

12. B – Profit margin cannot be calculated from the data in Exhibit 3 as revenue data is only presented for the first 90 days. Option A is a reasonable conclusion based on the relationship between revenue in the first 90 days and one year value. Option C can be concluded by calculating the average of the 'Number of Transactions' column, which equals 2.44. Option D can be concluded by calculating the average of the 'Average One Year Value' column.

13. D – Average transaction revenue can be calculated by dividing total revenue by number of transactions. The ranking, from lowest to highest. is 1 ($71.82), 3 ($80), 2 ($85.38), 5 ($85.96), 4 ($97.31).

14. C – There are 100,000 customers in each quintile. For each of the first four quintiles, calculating the difference in one year value versus the next highest quintile gives $0.50, $1.50, $5.00 and $18.00 respectively. Multiplying each by 100,000 and summing gives $50,000 + $150,000 + $500,000 + $1,800,000 = $2,500,000.

15. A – For customers purchasing Electronics, there was a 3.8% lift in transactions, and a 5% lift in number of customers making transactions. Therefore the number of transactions per customer compared to the control group was 103.8%/105% = 98.9%, ie a 'lift' of -1.1%. Option B is not possible to determine as there is no data on the number of customers in each product segment. Similarly, Option C is not possible to determine as there is no data on the number of transactions in each time segment. Finally, Option D cannot be determined for the same reasons as Option C.

Answers

16. A – There are 100,000 customers in total in the pilot, and the control and pilot groups are split equally, so 50,000 in each. If 10% of the control group made transactions, this equals 5,000 customers. From the bottom right hand corner of Exhibit 3, we can determine that the number for the pilot group was 1.7% higher, which equals 5,000 x 101.7% = 5,085.

17. B – From the total of the 4-6 week column the number of transactions was negatively impacted to a greater extent than the number of customers making transactions. This implies that the number of transactions per customer must also have been negatively impacted, which contradicts the statement in Option B. Option A can be concluded, as there was a 0.0% lift in the number of customers making transactions in the total for the Clothing/Apparel row. Option C can be concluded because the figures in the total column for Electronics are higher than for all other totals. Option D can be concluded because the figures in the first two columns of the row 'Other' are on average higher than those in the 3rd and 4th columns.

18. B – Option B may be helpful in understanding the execution of the pilot, but would not help in determining its impact in terms of transactions or revenue. Option A would help determine the impact of the pilot of revenues. Options C and D would help understand in greater detail which segments of the customer group were most impacted by the pilot.

19. C – This option is likely to impact whether a significant proportion of the pilot group read the emails they were sent, and thus this impacts the results of the pilot, which is the topic of the meeting with the Managing Director. Option A is unlikely to be a concern of the team or the Managing Director given that a control group was planned before the pilot began. Option B is unlikely to be the reason, as sending emails not related to the pilot is not a measure of how well the staff executed the pilot. Option D refers to something that could happen in the future, which is not the topic of the meeting with the Managing Director.

WFGLA

20. C – The President's aim is to increase donations. Answer choices A, B and D would help to increase donations. Option C is about targeting donors in a lower cost way, which is not the stated aim of the President, and hence would be the least relevant question for the team to answer.

Answers

21. A – The total amount of donations collected by other WF offices would be least helpful in and of itself, as different offices will target different population sizes and demographics and direct comparisons would be meaningless. B would help determine which types of donors to focus on. C and D would help determine the effectiveness of current campaigns.

22. A – Calculating campaign effectiveness (defined earlier in the scenario as pounds donated per campaign pound spent) gives you C = 40.9/2.0 = 20.5, E = 17.6/1.3 = 13.5, D = 23.6/2.1 = 11.2, B = 15.8/1.9 = 8.3, A = 35.7/4.4 = 8.1.

23. B – Calculating the average campaign effectiveness of Region A-H gives you 13.0 (total £ donated/total £ spent). To reach 13.0 WFGLA's current effectiveness level of 6.9 would need to increase by 87% (calculated by 13.0/6.9-1 or (13.0-6.9)/6.9].

24. B – Given that WFGLA is in contact with only ~10% of employees in small companies, which is a much smaller proportion than for medium and large companies, this option is the most likely to be true. Exhibit 6 does not represent ALL the employees in the greater London area so Option A cannot be concluded. Nothing is stated about the amount donated by the various segments, so it is not clear whether Option C is true. Option D is not correct because there are more people not contacted in medium-size companies than in large companies.

25. B – The equation to solve is 79,600 * £50 + 15,800 * (£50+x) + 3,800 * (£50 + 2x) = £6.13 million – solving for x gives you £50. However, as the question is how much a frequent contact Blue Collar employee is currently donating, this would be 2 * £50, i.e. £100.

26. A – Option A is only relevant in determining donation potential, which is not the topic of the question. Options B and D both refer to the amount of resources required in targeting the employee segments successfully, which would be an important consideration in prioritizing the groups. Option C will give an indication of the probability of success of campaigns with the various segments based on past experience – another useful indicator in prioritizing the segments.