PRACTICE PUZZLES

CL MOCK 1 & CAT 2018

Aman, Bineet, Charu, Devika, Eshan, Farhan, Gopal, and Hanish were shortlisted for the II-stage of the IIM admission process i.e the interview round, which was arranged at the Lucknow centre. For this round, they all reached at the venue on different timings. Also, their interviews were scheduled at different times of the day. The running time for an interview was of 30 minutes but for some of them, it ran for an extra 10 minutes. All of these candidates were interviewed by a single panel. The first interview started at 11:00 am and between any two consecutive interviews, there was a gap of 10 minutes, if nothing else is mentioned. Some additional Information is also known:

1. All the candidates reached the venue in such a way that between any two consecutive arrivals, there was a gap of 10 minutes with Eshan arriving as the last person at 11:30 am.
2. Hanish was the first person to arrive but was not the first person to be interviewed. Farhan did not wait the longest for his interview.
3. Charu arrived before Devika and Gopal, at 11 am and she had to wait for her interview for 2 hours.
4. Aman reached at the venue before Bineet and after Farhan. Also, Gopal's waiting time for the interview was one hour.
5. Farhan was interviewed before Gopal and there was no time-break between Gopal's Interview and Hanish's Interview.
6. After Bineet's Interview the panel had a tea-break for 20 minutes.
7. Only one person was interviewed between Bineet and Eshan, whose interview lasted for 40 minutes.
8. Between Charu's interview and Aman's interview, there was a gap of 20 minutes.
9. The last interview ended at 4 : 40 pm.

Q1. How many people arrived between Gopal and Farhan?

1. 6 2. 3 3. 4 4. Cannot be determined

Q2. For how long charu had to wait for Bineet, if they decided to leave together for home?

1. 100 minutes 2. 70 minutes 3. 80 minutes 4. 90 minutes

Q3. What is the average interview running time per person?

1. 32.5 minutes 2. 27.5 minutes 3. 28.75 minutes 4. 30 minutes

Q4. If Devika and Hanish interchange their interview slots, then out of all the interviewees, who waited for the maximum time for his/her turn?

1. Eshan 2. Hanish 3. Bineet 4. Gopal

Aman, Bineet, Charu, Devika, Eshan, Farhan, Gopal, and Hanish were shortlisted for the II-stage of the IIM admission process i.e the interview round, which was arranged at the Lucknow centre. For this round, they all reached at the venue on different timings. Also, their interviews were scheduled at different times of the day. The running time for an interview was of 30 minutes but for some of them, it ran for an extra 10 minutes. All of these candidates were interviewed by a single panel. The first interview started at 11:00 am and between any two consecutive interviews, there was a gap of 10 minutes, if nothing else is mentioned. Some additional Information is also known:

1. All the candidates reached the venue in such a way that between any two consecutive arrivals, there was a gap of 10 minutes with Eshan arriving as the last person at 11:30 am.
2. Hanish was the first person to arrive but was not the first person to be interviewed. Farhan did not wait the longest for his interview.
3. Charu arrived before Devika and Gopal, at 11 am and she had to wait for her interview for 2 hours.
4. Aman reached at the venue before Bineet and after Farhan. Also, Gopal's waiting time for the interview was one hour.
5. Farhan was interviewed before Gopal and there was no time-break between Gopal's Interview and Hanish's Interview.
6. After Bineet's Interview the panel had a tea-break for 20 minutes.
7. Only one person was interviewed between Bineet and Eshan, whose interview lasted for 40 minutes.
8. Between Charu's interview and Aman's interview, there was a gap of 20 minutes.
9. The last interview ended at 4 : 40 pm.

The base exchange rate of a currency X with respect to a currency Y is the number of units of currency Y which is equivalent in value to one unit of currency X. Currency exchange outlets buy currency at buying exchange rates that are lower than base exchange rates, and sell currency at selling exchange rates that are higher than base exchange rates.
A currency exchange outlet uses the local currency L to buy and sell three international currencies A, B, and C, but does not exchange one international currency directly with another. The base exchange rates of A, B and C with respect to L are in the ratio 100:120:1. The buying exchange rates of each of A, B, and C with respect to L are 5% below the corresponding base exchange rates, and their selling exchange rates are 10% above their corresponding base exchange rates. The following facts are known about the outlet on a particular day:
1. The amount of L used by the outlet to buy C equals the amount of L it received by selling C.
2. The amounts of L used by the outlet to buy A and B are in the ratio 5:3.
3. The amounts of L the outlet received from the sales of A and B are in the ratio 5:9.
4. The outlet received 88000 units of L by selling A during the day.
5. The outlet started the day with some amount of L, 2500 units of A, 4800 units of B, and 48000 units of C.
6. The outlet ended the day with some amount of L, 3300 units of A, 4800 units of B, and 51000 units of C.

Q1. How many units of currency A did the outlet buy on that day?

Q2. How many units of currency C did the outlet sell on that day?
A 22000 B 19000 C 6000 D 3000

Q3. What was the base exchange rate of currency B with respect to currency L on that day ?

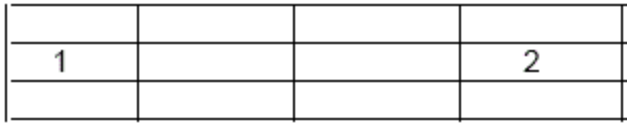
Q4. What was the buying exchange rate of currency C with respect to currency L on that day?
A 1.10 B 0.95 C 2.20 D 1.90

The base exchange rate of a currency X with respect to a currency Y is the number of units of currency Y which is equivalent in value to one unit of currency X. Currency exchange outlets buy currency at buying exchange rates that are lower than base exchange rates, and sell currency at selling exchange rates that are higher than base exchange rates.

A currency exchange outlet uses the local currency L to buy and sell three international currencies A, B, and C, but does not exchange one international currency directly with another. The base exchange rates of A, B and C with respect to L are in the ratio 100:120:1. The buying exchange rates of each of A, B, and C with respect to L are 5% below the corresponding base exchange rates, and their selling exchange rates are 10% above their corresponding base exchange rates. The following facts are known about the outlet on a particular day:

1. The amount of L used by the outlet to buy C equals the amount of L it received by selling C.
2. The amounts of L used by the outlet to buy A and B are in the ratio 5:3.
3. The amounts of L the outlet received from the sales of A and B are in the ratio 5:9.
4. The outlet received 88000 units of L by selling A during the day.
5. The outlet started the day with some amount of L, 2500 units of A, 4800 units of B, and 48000 units of C.
6. The outlet ended the day with some amount of L, 3300 units of A, 4800 units of B, and 51000 units of C.

In a grid of dimension m x n, where m is the number of rows and n is the number of columns, the neighboring cells to any cell ‘aij' are those which have at least a side or a corner common to the cell aij. Each of the cells of the grid needs to be filled by Amit with a distinct natural number among 1, 2, ..., mn, keeping the following restrictions in mind:



i) He must start filling with number 1, then number 2 and so on till number mn.
ii) No two neighboring cells can have consecutive natural numbers. Also, all the cells in the odd numbered columns must be filled with the odd natural numbers.
iii) While filling any number, he must choose a cell in such a way that the maximum possible cells are ruled out for the next natural number.
iv) Number 1 can be filled randomly in any cell without necessarily satisfying the above point.
v) If there are more than one possible cells with the maximum number of neighbours, then he can randomly choose any of them.

Example: In the grid shown below, number 3 can be filled either in 1st row and 1st column or in 3rd row and 1st column, as in both the cases it will eliminate 2 places for '4' which is the maximum possible.
Q1. If number ‘1’ is blindly filled by Amit in the 1st row and 1st column of a 4 × 4 grid, then in how many ways can he fill the remaining grid?
Q2. If number ‘1’ is blindly filled by Amit in the 1st row and 1st column of a 4 × 4 grid, then what is the difference between the sum of all the numbers in row 1 and that in row 4?
1. 0 2. 4 3. 6 4. Cannot be determined

Q3. If number ‘1’ is blindly filled by Amit in the 1st row and 1st column of a 4 × 4 grid, then which natural number can be written in the cell just above the cell having number ‘12’ written in it?
1. 14 2. 16 3. 10 4. Either 14 or 16

Q4. In how many ways can a 3 × 4 grid be filled?