Leadsquared Assessment

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JOB ROLE PREFERENCE: Reports Developer

Q1. Write a query to print the number of employees per department in the organization.

Sol.: select DEPARTMENT , count(EMPLOYEE_ID) from Employee group by DEPARTMENT;

Q2. Write an SQL query to find the name of the top-level manager of each department.

Sol.: select concat(FIRST_NAME, ' ', LAST_NAME) as EMPLOYEE_NAME , max(SALARY) from Employee group by DEPARTMENT;

(Assuming the top-level manager of a department is one who has the maximum salary in the department).

Q3. Write a query to find the total incentive received by a given employee in a given month.

Sol.: select EMPLOYEE_REF_ID , month(INCENTIVE_DATE) , sum (INCENTIVE_AMOUNT) from Incentives group by month(INCENTIVE_DATE);

Q4. Write a query to find the month where employees got maximum incentive.

Sol.: select EMPLOYEE_REF_ID , max(INCENTIVE_AMOUNT), month (INCENTIVE_DATE) from Incentives group by INCENTIVE_DATE;

Q5.

STEPS:

1. Start the 7 minute sand timer and the 4 minute sand timer simultaneously.

2. Once the 4 minute sand timer ends turn it upside down instantly.

Time Elapsed: 4 minutes. *At this moment, 3 minutes of sand is left in the 7 minute sand timer.*

3. Use the 4 minute timer again (with all the sand in one end). Once the 7 minute sand timer with the 3 minutes of sand time left ends, turn it upside down instantly.

Time Elapsed: 7 minutes. *At this moment, 1 minutes of sand is left in the 4 minute sand timer.*

4. Now turn the seven minute sand timer (with all the sand in one side) upside down After the 4 minute sand timer ends, only 1 minute is elapsed in 7 minute sand timer, hence you have 1 minute worth of sand in one chamber of the seven minute timer. Therefore

Time Elapsed: 7+1=8 minutes.

5. Now, turn the turn the 7 minute sand timer upside down till the sand worth of 1 minute in it's chamber is empty in the next minute.When the 7 minute sand timer ends, total time elapsed is 9 minutes.

So effectively **Time Elapsed: 8 + 1 = 9 minutes.**

Q6.

John and Mary had two kids. As per probability, there are four options: {BB, BG, GB, GG} - all equally probable.

So, sample space (S) = {BB, BG, GB, GG}

Now, the event that one of the kids is a girl = A = {BG, GB, GG}.

So, P(A) = n(A) / n(S) = 3 / 4

And, the event that both kids are girls = B = {GG}.

So, (B∩A) = {GG} and, P (B∩A) = 1 / 4

So, P (B / A) = P (B∩A) / P (A) = (1 / 4) / (3 / 4) = (1 / 3).

The answer is (1 / 3).

Q7.

This could go one of two ways.And if we aren't picking any sides and we're just a neutral observer, then it is a fair assumption to draw since the firm is mentioning figures.Since they only started advertising over the radio last year so a major part of the surge in their profits could be attributed to the radio advertising. However, if we look at it from business point of view, they had an increase in their profits by 10% last year.But we don't know since when they've been operating and what other means of advertising they've been using.Perhaps there could've been a change in their business plan, or their staff and so on.There could be a lot of other factors too that accounted to such a change.

This works fine an as advertisement gimmick.This could entice a lot of customers but it doesn't give you the complete picture.We'll only get the complete picture when we're certain about the other factors remaining constant.Therefore it wouldn't be correct to assume that only radio advertising led to the surge in their profits.

For countering the argument,We could ask the company to give us figures of their profits in the last couple of years vs the previous year. We also don't know the kind of start-up it is.If it's a small start up that actually needs advertising and how the economy has been going in the last couple of years, this could be accounted to that too.And also the trend of people eating outside has been growing in the last couple of years. This could also be a factor for the change.