

# **Leadsquared online test**

## **Reports Developer Role**

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

```
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.**

```
select nvl(manager,0) , max(salary) from Employee group by Department;
```

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

```
select sum (incentive_amount) , employee_ref_id from incentives group by month(incentive_date), employee_ref_id;
```

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

```
select rank () over (order by incentive_amount partition by incentive_date ) as rnk where rnk =1;
```

**Q5) You have two sand timers, which can show 4 minutes and 7 minutes respectively. Use both the sand timers (at a time or one**

**after other or any other combination) and measure a time of 9 minutes.**

I will use the following steps-

1. Start the 7 minute sand timer and the 4 minute sand timer.
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. Once the 7 minute sand timer 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. After the 4 minute sand timer ends, only 1 minute is elapsed in 7 minute sand timer, therefore for another minute turn the 7 minute sand timer upside down.

Time Elapsed: 8 minutes.

5. When the 7 minute sand timer ends, total time elapsed is 9 minutes.

So effectively  $8 + 1 = 9$ .

**Q6) John and Mary are a married couple. They have two kids, one of them is a girl. Assume safely that the probability of each gender is  $1/2$ .**

**What is the probability that the other kid is also a girl?**

If John and Mary have two children then there are four possibilities:

- 1) The first child is a boy and the second child is a boy (bb)
- 2) The first child is a boy and the second child is a girl (bg)
- 3) The first child is a girl and the second child is a boy (gb)
- 4) The first child is a girl and the second child is a girl (gg)

Since we are given that at least one child is a girl there are three possibilities: bg, gb, or gg. Out of those three possibilities the only one with two girls is gg. Hence the probability is  $1/3$ .

**Q7) The following appeared as part of a campaign to sell advertising time on a local radio station to local businesses. Ron's Cafe began advertising on our local radio station this year and was delighted to see its business increase by 10 percent over last year's totals. Their success shows you how you can use radio advertising to make your business more profitable. Discuss how well reasoned you find this argument. In your discussion be sure to analyze the line of reasoning and the use of evidence in the argument. For example, you may need to consider what questionable assumptions underline the thinking and what alternative explanations or counterexamples might weaken the conclusion. You can also discuss what sort of evidence would strengthen or refute the argument, what changes in the argument would make it more logically sound and what, if anything, would help you better evaluate in conclusion.**

This argument is unconvincing because two questionable assumptions must be made for the stated evidence to support the author's conclusion.

The first assumption is that radio advertising alone has caused the increase in business at the Ron's Cafe. This assumption is questionable because it overlooks a number of other factors that might have contributed to the Ron's Cafe's success. For example, the Ron's Cafe might have changed owners or chefs. It might have launched a coupon ad campaign in the local print media. Or it might have changed or updated the menu.

Yet another possibility is that a local competitor went out of business. These are just a few of the factors that could help explain the Ron's Cafe's growth. Because the author fails to eliminate these possibilities, the assumption in question need not be accepted.

Even if it is granted that radio advertising is responsible for the Ron's

Cafe's success, another assumption must be made before we can conclude that radio advertising will result in increased profits for businesses in general. We must also assume that what is true of the Ron's Cafe will likewise be true of most other businesses.

But there are all kinds of important differences between cafes and other businesses that could affect how radio audiences react to their advertising. We cannot safely assume that, because a small restaurant has benefited from radio advertising, any and all local businesses will similarly benefit.

In conclusion, it would be imprudent for a business to invest in radio advertising solely on the basis of the evidence presented. To strengthen the conclusion, it must be established that radio advertising was the principal cause of increased business at the Ron's Cafe.

Once this is shown, it must be determined that the business in question is sufficiently similar to the Ron's Cafe and so can expect similar returns from investment in radio ad time.