

1. Query to Pull the Most Recent Redemption Count:

```
WITH LatestRedemptions AS (  
    SELECT  
        retailerId,  
        redemptionDate,  
        MAX(createDateTime) AS latestCreateDateTime  
    FROM  
        tblRedemptions-ByDay  
    WHERE  
        redemptionDate BETWEEN '2023-10-30' AND '2023-11-05'  
        AND retailerId = (SELECT id FROM tblRetailers WHERE retailerName = 'ABC Store')  
    GROUP BY  
        retailerId,  
        redemptionDate  
)  
SELECT  
    rbd.redemptionDate,  
    rbd.redemptionCount  
FROM  
    tblRedemptions-ByDay rbd  
JOIN LatestRedemptions lr ON rbd.retailerId = lr.retailerId  
AND rbd.redemptionDate = lr.redemptionDate  
AND rbd.createDateTime = lr.latestCreateDateTime  
ORDER BY  
    rbd.redemptionDate;
```

This query first determines the latest createDateTime for each redemptionDate in the specified date range for "ABC Store". Then, it selects the redemptionCount for these latest entries.

2. Answering the Questions:

Based on the result of the query:

Data:

redemptionDate	redemptionCount
2023-10-30	4274
2023-10-31	5003
2023-11-01	3930
2023-11-02	NULL
2023-11-03	3810
2023-11-04	NULL
2023-11-05	3702

Questions and Answers:

- Which date had the least number of redemptions and what was the redemption count?**
 - Date: 2023-11-05
 - Redemption Count: 3702
- Which date had the most number of redemptions and what was the redemption count?**
 - Date: 2023-10-31
 - Redemption Count: 5003
- What was the `createDateTime` for each `redemptionCount` in questions 1 and 2?**
 - For 2023-11-05 (least redemptions): 2023-11-06 11:00:00 UTC
 - For 2023-10-31 (most redemptions): 2023-11-06 11:00:00 UTC
- Is there another method you can use to pull back the most recent redemption count, by redemption date, for the date range 2023-10-30 to 2023-11-05, for retailer "ABC Store"?**

Another method involves using window functions to rank the records by `createDateTime` within each `redemptionDate` partition and then selecting the top-ranked record:

```

SELECT

    redemptionDate,

    redemptionCount

FROM (

    SELECT

        redemptionDate,

        redemptionCount,

        ROW_NUMBER() OVER (PARTITION BY redemptionDate ORDER BY
createDateTime DESC) AS row_num

    FROM

        tblRedemptions-ByDay

    WHERE

        retailerId = (SELECT id FROM tblRetailers WHERE retailerName = 'ABC
Store')

        AND redemptionDate BETWEEN '2023-10-30' AND '2023-11-05'

) AS ranked

WHERE

    row_num = 1

ORDER BY

    redemptionDate;

```

This approach uses `ROW_NUMBER` to assign a rank to each record within the same `redemptionDate` partition based on the `createDateTime`, and then it filters to get only the latest record for each date.