Ankur Jat – Task 1 output

Query Table link –

https://analytics.zoho.in/open-view/435490000000002432/6ac243b9ebef30bfcbcb8bc7c7af7abb

Query –

```
SELECT
    sl.roll_number,
    sl.student_name,
    sc.class,
    sc.section,
    sc.school_name,

    /* Count of correct answers in Math */
    SUM(CASE
```

```
            WHEN qp.subject = 'Math' AND sr.option_marked = ca.correct_option THEN
1
        ELSE 0
    END) AS math_correct,


/* Count of wrong answers in Math (attempted but incorrect) */
SUM(CASE
        WHEN qp.subject = 'Math'
            AND sr.option_marked IN ('a', 'b', 'c', 'd')
            AND sr.option_marked != ca.correct_option THEN 1
        ELSE 0
    END) AS math_wrong,


/* Count of yet to learn answers in Math (option marked as 'e') */
SUM(CASE
        WHEN qp.subject = 'Math' AND sr.option_marked = 'e' THEN 1
        ELSE 0
    END) AS math_yet_to_learn,


/* Total score in Math (same as correct count) */
SUM(CASE
        WHEN qp.subject = 'Math' AND sr.option_marked = ca.correct_option THEN
1.0
        ELSE 0
```

```
            END) AS math_score,


    /* Percentage score in Math */
    ROUND(100.0 * SUM(CASE
            WHEN qp.subject = 'Math' AND sr.option_marked = ca.correct_option THEN
1
            ELSE 0
        END) / NULLIF(COUNT(CASE
            WHEN qp.subject = 'Math' THEN 1
        END), 0), 2) AS math_percentage,


    /* Count of correct answers in Science */
    SUM(CASE
            WHEN qp.subject = 'Science' AND sr.option_marked = ca.correct_option
THEN 1
            ELSE 0
        END) AS science_correct,


    /* Count of wrong answers in Science */
    SUM(CASE
        WHEN qp.subject = 'Science'
            AND sr.option_marked IN ('a', 'b', 'c', 'd')
            AND sr.option_marked != ca.correct_option THEN 1
        ELSE 0
```

```
        END) AS science_wrong,


    /* Count of yet to learn answers in Science (option marked as 'e') */
    SUM(CASE
        WHEN qp.subject = 'Science' AND sr.option_marked = 'e' THEN 1
        ELSE 0
      END) AS science_yet_to_learn,


    /* Total score in Science */
    SUM(CASE
        WHEN qp.subject = 'Science' AND sr.option_marked = ca.correct_option
THEN 1.0
        ELSE 0
      END) AS science_score,


    /* Percentage score in Science */
    ROUND(100.0 * SUM(CASE
        WHEN qp.subject = 'Science' AND sr.option_marked = ca.correct_option
THEN 1
        ELSE 0
      END) / NULLIF(COUNT(CASE
        WHEN qp.subject = 'Science' THEN 1
      END), 0), 2) AS science_percentage
```

```sql
/* Joining all required tables for student performance analysis */

FROM student_list sl

JOIN school_class sc ON sl.section_id = sc.section_id

JOIN student_response sr ON sl.roll_number = sr.roll_number

JOIN correct_answer ca ON sr.question_paper_code = ca.question_paper_code
                AND sr.question_number = ca.question_number

JOIN question_paper_code qp ON sr.question_paper_code = qp.paper_code


/* Grouping by student for per-student analysis */

GROUP BY sl.roll_number, sl.student_name, sc.class, sc.section, sc.school_name


/* Sorting output by roll number */

ORDER BY sl.roll_number;
```