

DAY 16 - COVID PERCENTAGE INCREASE

PROBLEM STATEMENT: The given table contains reported COVID cases in 2020.

Calculate the percentage increase in COVID cases each month versus cumulative cases as of the prior month.

Return the month number, and the percentage increase rounded to one decimal. Order the result by the month.

INPUT

INPUT	
CASES_REPORTED	DATE
20124	01/10/2020
40133	01/15/2020
65005	01/20/2020
30005	02/08/2020
35015	02/19/2020
15015	03/03/2020
35035	03/10/2020
49099	03/14/2020
84045	03/20/2020
100106	03/31/2020
17015	04/04/2020
36035	04/11/2020
50099	04/13/2020
87045	04/22/2020
101101	04/30/2020
40015	05/01/2020
54035	05/09/2020
71099	05/14/2020
82045	05/21/2020
90103	05/25/2020

OUTPUT

OUTPUT	
MONTH	PERCENTAGE_INCREASE
1	-
2	51.9
3	148.9
4	61.5
5	57.1
6	10.2
7	5.7
8	3.9
9	7.9
10	1.7
11	6.4
12	7.4

SOLUTION

```
With cte as(
select MONTH(dates) as months,SUM(cases_reported) as current_cases
from covid_cases
group by MONTH(dates)
), totalCasesCte as(
select *, sum(current_cases) over(order by months) as rolling_cases_sum
from cte
)
select months, isnull(cast(
    cast(current_cases*1.0/lag(rolling_cases_sum)over (order by months)*100 as decimal(5,1)) as varchar),
    '-')
as percent_incr
from totalCasesCte
```

OUTPUT

	months	percent_incr
1	1	-
2	2	51.9
3	3	148.9
4	4	61.5
5	5	57.1
6	6	10.2
7	7	5.7
8	8	3.9
9	9	7.9
10	10	1.7
11	11	6.4
12	12	7.4