THE BLUNDER

OCTOBER 2023	
Aggregation	
Hackerrank	
Beginner	

Samantha was tasked with calculating the average monthly salaries for all employees in the **EMPLOYEES** table, but did not realize her keyboard's numerical **0** key was broken until after completing the calculation. She wants your help finding the difference between her miscalculation (using salaries with any zeros removed), and the actual average salary.

Write a query calculating the amount of error (i.e.: **actual - miscalculated** average monthly salaries), and round it up to the next integer.

INPUT FORMAT

The **EMPLOYEES** table is described as follows:

COLUMN	TYPE
ID	Integer
Name	String
Salary	Integer

NOTE: Salary is per month

CONSTRAINTS

$1000 < Salary < 10^5$

SAMPLE INPUT

ID	NAME	SALARY
1	Kristeen	1420
2	Ashley	2006
3	Julia	2210
4	Maria	3000

Sample Output

2061

EXPLANATION

The table below shows the salaries without zeros as they
were entered by Samantha:

ID	NAME	SALARY
1	Kristeen	142
2	Ashley	26
3	Julia	221
4	Maria	3

Samantha computes an average salary of 98.00. The actual average salary is 2159.00

The resulting error between the two calculations is $2159.00 - 98.00 = 2061.00$. Since it is equal to the integer 2061, it does not get rounded up.

CODE SOLUTION

```
SELECT

ROUND(AVG(SALARY) - AVG(REPLACE(SALARY,'0','')),0)+1


FROM EMPLOYEES
```

SOLUTION PROCESS

- Replace function: Replicate error version of salary column to reflect Samantha's omission error by removing every zero
- Average function: Calculate average of each version of salary inputs to calculate difference
- Round function: Nest difference of averages to round to zero decimals, thus producing an integer. Add 1 to simulate rounding up to next integer

OUTPUT

2253