

11485 Extreme Discrete Summation

Given set S what is the value of the right hand side of the following assignment? In other words what is the value of A .

$$A = \sum_{x_1 \in S} \sum_{x_2 \in S} \sum_{x_3 \in S} \sum_{x_4 \in S} \sum_{x_5 \in S} \sum_{x_6 \in S} \sum_{x_7 \in S} \sum_{x_8 \in S} \left(\left\lfloor \sum_{i=1}^8 x_i \right\rfloor - \sum_{i=1}^8 \lfloor x_i \rfloor \right)$$

For example if $S = \{1.2, 3.6, 4.1\}$ then the possible values for variable x_i is 1.2, 3.6 or 4.1. The same is true for variables $x_1, x_2, x_3, x_4, x_5, x_6, x_7, x_8$. Here $\lfloor x \rfloor$ means the nearest smaller integer value of x (floor function). For example $\lfloor 1.8 \rfloor = 1$, $\lfloor 2.0 \rfloor = 2$, $\lfloor -2.3 \rfloor = -3$

Input

The input file contains 100 sets of inputs. The description of each set is given below:

The input for each set is contained in a single line. This line starts with an integer N ($0 < N < 101$) which denotes how many numbers are in the set S . This integer is followed by N non-negative floating-point numbers in the same line. To make things easy with floating-point numbers and to avoid precision problems these numbers have only a single digit after the decimal point. Also the values of any of these numbers are not greater than 1000.

Input is terminated by line containing a single zero.

Output

For each set of input produce one line of output. This line contains an integer which denotes the value of A .

Sample Input

```
1 11.4
4 537.0 365.1 870.2 841.7
2 216.5 4.8
0
```

Sample Output

```
3
101672
1196
```