

# Chi-square test of Benford distribution

I'm not a great tale-teller. Hence here are no stories about uncovered trickery but only the facts. You get around 500 integers between 1 and 100000. Check with the  $\chi^2$  test how well the distribution of their first digits does observe [Benford's law](#).

## Input

In the first line one number N, then N lines with one number.

## Output

The result of the  $X^2$  test of the Benford distribution with two digits after the decimal point.

## Example

### Input:

```
10
45564
2915
1454
14200
19
12943
4375
36588
31858
474
```

### Output:

```
8.37
```