Chess board (4)   X29759_en

Consider a square chess board with *n* rows and *n* columns, where every square contains between 0 and 9 coins. Write a program such that, given a chess board, computes the difference between the total number of coins on white aquares and the total number of coins on black squares.

Input

Input begins with the size *n* of the board. Follow *n* lines, each one with *n* characters between '0' and '9'.

Output

Print the total number of coins on white squares, the tthe two diagonals of the board. the total number of coins on black squares, and their difference. Follow the format provided in the examples.

Sample input 1

```
4
2389
3402
3956
2018
```

Sample output 1

```
32-33 = -1
```

Sample input 2

```
3
975
123
450
```

Sample output 2

```
20-16 = 4
```

Problem information

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Generation: 2026-01-25T14:58:54.738Z