**Binary Conversion**

**Problem Description**

Convert binary numbers into decimal numbers and compute their sum.

**Input**

The input consists of several cases. The first line of each case contains only one positive integer *N* indicating the number of binary strings in this case, followed by N binary strings, each in one line.

Each binary string has at most 16 digits, and each digit is either 0 or 1. The case of N=0 signs the end of input, and you don’t need to compute this case.

**Output**

For each case, print the result in one line. The result is at most 232-1.

**Sample Input**

2

1010000

000001

3

11110000

10000000

00000

0

**Sample Output**

81

368