

In finance, Internal Rate of Return (*IRR*) is the discount rate of an investment when NPV equals zero. Formally, given T , CF_0 , CF_1 , \dots , CF_T , then *IRR* is the solution to the following equation:

$$NPV = CF_0 + \frac{CF_1}{1 + IRR} + \frac{CF_2}{(1 + IRR)^2} + \dots + \frac{CF_T}{(1 + IRR)^T} = 0$$

Your task is to find all valid *IRRs*. In this problem, the initial cash-flow $CF_0 < 0$, while other cash-flows are all positive ($CF_i > 0$ for all $i = 1, 2, \dots$).

Important: *IRR* can be negative, but it must be satisfied that $IRR > -1$.

Input

There will be at most 25 test cases. Each test case contains two lines. The first line contains a single integer T ($1 \leq T \leq 10$), the number of positive cash-flows. The second line contains $T + 1$ integers: CF_0 , CF_1 , CF_2 , \dots , CF_T , where $CF_0 < 0$, $0 < CF_i < 10000$ ($i = 1, 2, \dots, T$). The input terminates by $T = 0$.

Output

For each test case, print a single line, containing the value of *IRR*, rounded to two decimal points. If no *IRR* exists, print 'No' (without quotes); if there are multiple *IRRs*, print 'Too many' (without quotes).

Sample Input

```
1
-1 2
2
-8 6 9
0
```

Sample Output

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1.00
0.50
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