Balance life and work

Quynh kept working for M months, then took M months unpaid leave to travel for vacation.

Let's calculate Quynh's savings after M months of unpaid travel, knowing that:

1. Quynh’s salary of M months as Mi, where i ranges from 0 to M-1.
2. After receiving her monthly salary, Quynh spends X USD on expenses. The monthly expenses increase according to an annual inflation rate of f% which is estimated by: X[i+1] = X[i]*(1+f%/12)
3. Quynh invests the surplus amount each month with an annual interest rate of r% which can be calculated using the formula: SaveMoney[i+1] = SaveMoney[i]*(1+r%/12).

Input

- The number of months M ($M \le 500$), the amount of money earning per each month Mi USD as i = {1,…,M} ($Mi \le 109$), the monthly expenditure X USD ($X \le 10^9$), the yearly inflation rate f%, the yearly interest rate r%.

Output

- The amount of saving money remains after M months to traveling. If saving money is negative return 0. The result is rounded to unit.

Sample

Input	Output
1 1500 500 12 12	510