Home Loan

An wants to buy a new house worth N VND but has only M VND so he can borrow from the bank with interest rate of X% for K months. The debt should be paid equivalently every month. However, he also needs to pay interest of the unpaid debt.

Please help him to calculate how much he needs to pay every month.

Input

The only line contains 3 integers N, M, K and a real number X ($0 < N, M < 10^{12}, 0 < K < 500, 0 < X \le 100$).

Output

For each month, from 1 to K, output the index and the amount of money An have to pay.

Sample

Input	Output
1000000000 0 12 0.9	1 92333333
	2 91583333
	3 90833333
	4 90083333
	5 89333333
	6 88583333
	7 87833333
	8 87083333
	9 86333333
	10 85583333
	11 84833333
	12 84083333