Problem D
It's a Mod, Mod, Mod, Mod World

You are given multiple problems with three integers p, q, and n. Find $\sum_{i=1}^{n}[(p \cdot i) \bmod q]$. That is, the first n multiples of p, modulo q, summed. Note that the overall sum has no modulus.

Input

Each input will begin with a line with a single integer W ($1 \leq W \leq 10^5$), which is the number of cases you must solve.

Each of the next W lines will contain three space-separated integers p, q and n ($1 \leq p, q, n \leq 10^6$), which are the parameters of the problem as described above.

Output

Output W lines, each with the answer for a given instance of the problem, in the order that they appear in the input.

Sample Input 1	Sample Output 1
3 2 7 2 1 4 5 3 8 10	6 7 37

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