Let d(n) be the sum of all divisors of n. For example d(6) = 1 + 2 + 3 + 6 = 12. Given integers n and k, compute the sum of all integers m for $1 \le m < n$, such that d(m) is a multiple of k, i.e. d(m) = l * k, where l is a positive integer.

Input

A number of of inputs (≤ 100), each start with the number of value of integers $n, k \ (1 \leq n, k \leq 10000000)$.

Output

Output the answer modulo 100000007.

Sample Input

10 5 20 5

20 5

Sample Output

8 27