

## Problem J. Bobby Tables

Input file: *standard input*  
Output file: *standard output*  
Time limit: 2 seconds  
Memory limit: 512 mebibytes

Little Bobby Tables stores his favorite big numbers in his database. Those numbers take a lot of memory, so he is trying to figure out a way to store them more efficiently. He noticed that in the database there is a number  $X$  which has no large prime factors, and he suspects that it is of the form  $\binom{n}{k}$ , for some relatively small numbers  $n, k$ .

Help Bobby and check if it is really the case. Given an integer  $m$  and the prime factorization of  $X$ , determine whether there exist integers  $n, k$  such that  $0 \leq k \leq n \leq m$  and  $X = \binom{n}{k}$ .

### Input

The first line of input contains the number of test cases  $z$  ( $1 \leq z \leq 10\,000$ ). The descriptions of the test cases follow.

The first line of every test case contains two integers  $t, m$  ( $1 \leq t, m \leq 150\,000$ ), the number of primes in the factorization of  $X$  and the upper bound for output values, respectively. The second line contains  $t$  primes  $p_i$  ( $2 \leq p_i \leq m$ ), such that product of all  $p_i$  is  $X$ .

The sum of the numbers  $t$  in all the test cases does not exceed 200 000. The sum of the numbers  $m$  in all the test cases does not exceed 2 000 000.

### Output

For each test case, if there exist appropriate  $n$  and  $k$ , output “YES” in the first line, and the values of  $n$  and  $k$  in the second line. Otherwise output only one line containing “NO”.

### Example

standard input	standard output
2	YES
2 5	4 2
3 2	NO
3 7	
2 2 2	