Boring Constructive Problem

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	1024 megabytes

The most boring constructive problem in the world is to read n, m and output a matrix satisfying conditions 1,2,3,4,5,6,7,8.

Given four integers a, b, n, s ($a \neq b$). You need to construct a sequence c of length n such that:

- For every $1 \leq i \leq n$, $c_i \in \{a, b\}$;
- There does not exist a contiguous subarray $c_l, c_{l+1}, \ldots, c_r$ whose sum is exactly s.

More formally, there do not exist integers (l, r) satisfying $1 \leq l \leq r \leq n$ such that $c_l + c_{l+1} + \cdots + c_r = s$.

For each test case, determine whether such a sequence exists:

- If it exists, output `YES`, and output any valid sequence;
- Otherwise, output `NO`.

Input

The first line contains an integer T ($1 \leq T \leq 10^5$), denoting the number of test cases.

Each of the next T lines contains four integers a, b, n, s ($1 \leq a, b, s \leq 10^9$, $1 \leq n \leq 5 \cdot 10^5$, $a \neq b$).

It is guaranteed that the sum of all n does not exceed $5 \cdot 10^5$.

Output

For each test case:

- If there is no solution, output a line containing `NO`;
- If there is a solution, first output a line containing `YES`, then output a line containing n integers representing the sequence you constructed.

If there are multiple valid answers, output any of them.

Example

standard input	standard output
3 2 4 6 8 2 5 5 9 3 4 3 7	NO YES 2 5 5 5 2 YES 4 4 4