X Equals Y

Input file:	`standard input`
Output file:	`standard output`
Time limit:	3 seconds
Memory limit:	1024 megabytes

For positive integers X and $b \geq 2$, define $f(X, b)$ as a sequence which describes the base-b representation of X, where the i-th element in the sequence is the i-th least significant digit in the base-b representation of X. For example, $f(6, 2) = \{0, 1, 1\}$, while $f(233, 17) = \{12, 13\}$.

Given four positive integers x, y, A and B, please find two positive integers a and b satisfying:

- $2 \leq a \leq A$
- $2 \leq b \leq B$
- $f(x, a) = f(y, b)$

Input

There are multiple test cases. The first line of the input contains an integer T ($1 \leq T \leq 10^3$) indicating the number of test cases. For each test case:

The first line contains four integers x, y, A and B ($1 \leq x, y \leq 10^9$, $2 \leq A, B \leq 10^9$).

It's guaranteed that there are at most 50 test cases satisfying $\max(x, y) > 10^6$.

Output

For each test case, if valid positive integers a and b do not exist, output `NO` in one line.

Otherwise, first output `YES` in one line. Then in the next line, output two integers a and b separated by a space. If there are multiple valid answers, you can output any of them.

Example

standard input	standard output
6 1 1 1000 1000 1 2 1000 1000 3 11 1000 1000 157 291 5 6 157 291 3 6 10126 114514 789 12345	YES 2 2 NO YES 2 10 YES 4 5 NO YES 779 9478