
Another Number

Given integers A, B, C, and D. Find whether there is X such that $(A \cdot X + B) \% D = C$.

Format Input

The input begins with an integer T indicating the number of test cases. In each test case, there is 4 integers A, B, C, and D.

Format Output

For each test case, output YES if there is X such that $(A \cdot X + B) \% D = C$. Otherwise output NO.

Constraints

$1 \leq T \leq 10$

$0 \leq A, B, C, D \leq 100000$

Sample Input (standard input)	Sample Output (standard output)
2 1 2 3 4 3 100 0 9900	Case #1: YES Case #2: NO