



Problem D

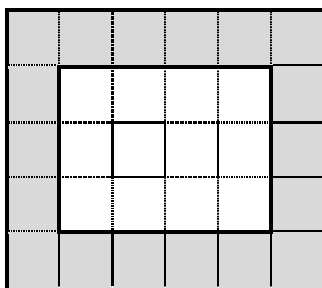
Frame

Input File: D.in

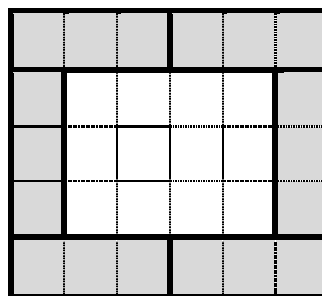
Output File: standard output

Program Source File: D.c, D.cpp, D.java

Let's consider a $x \times y$ rectangle with the middle $(x - 2) \times (y - 2)$ rectangle cut out. We will call this figure a frame with size $x \times y$. Picture 1 shows the frame 5×6 .



Picture 1. Frame 5×6



Picture 2. Frame 5×6 , paved with tiles 3×1

Let's assume that we have unlimited number of tiles with size $a \times 1$. We consider the following problem: is it possible to completely pave a frame with size $x \times y$ using these tiles (tiles can be rotated by 90 degrees). For example, frame 5×6 from Picture 1 can be paved completely with tiles of size 3×1 (one way to do so is shown in Picture 2), but can't be paved with tiles of size 4×1 .

Input

The first input line contains 2 integers – x and y ($3 \leq x \leq 10^6$, $3 \leq y \leq 10^6$). The second line contains integer n – the number of tile types to be analyzed ($1 \leq n \leq 1000$). Each of following n lines contains one integer, not exceeding 10^6 . We designate with a_k the integer on the $(k+2)$ -th line of the input file.

Output

Your goal is to print n lines, where the k -th line should contain the word "YES", if it is possible to tile the frame with size $x \times y$ with tiles $a_k \times 1$, and the word "NO" otherwise.

Sample input	Sample output
5 6	YES
2	NO
3	
4	