

Divisibility

Consider an arbitrary sequence of integers. One can place + or - operators between integers in the sequence, thus deriving different arithmetical expressions that evaluate to different values. Let us, for example, take the sequence: 17, 5, -21, 15. There are eight possible expressions:

$17 + 5 + -21 + 15 = 16$
 $17 + 5 + -21 - 15 = -14$
 $17 + 5 - -21 + 15 = 58$
 $17 + 5 - -21 - 15 = 28$
 $17 - 5 + -21 + 15 = 6$
 $17 - 5 + -21 - 15 = -24$
 $17 - 5 - -21 + 15 = 48$
 $17 - 5 - -21 - 15 = 18$

We call the sequence of integers **divisible** by K if + or - operators can be placed between integers in the sequence in such way that resulting value is divisible by K . In the above example, the sequence is divisible by 7 ($17 + 5 + -21 - 15 = -14$) but is not divisible by 5.

You are to write a program that will determine divisibility of sequence of integers.

Input

The first line of the input file contains an integer N indicating the number of cases to be analyzed. Then N pairs of lines follow.

For each one of this pairs, the first line contains two integers, M and K ($1 \leq M \leq 1000$, $2 \leq K \leq 100$) separated by a space. The second line contains a sequence of M integers separated by spaces. Each integer is not greater than 10000 by its absolute value.

Output

For each case in the input file, write to the output file the word "YES" if given sequence of integers is divisible by K or "NO" if it's not.

| Sample Input | Sample output |
|--------------|---------------|
| 2 | YES |
| 4 7 | NO |
| 17 5 -21 15 | |
| 4 5 | |
| 17 5 -21 15 | |