

Get Stronger

To shape his strength, Robert is doing weightlifting. His training set consists of $n < 20$ weight plates: x_1, x_2, \dots, x_n ($1 \leq x_i \leq 20$). Check, if he is able to compose a total weight of X with his training set.

Input data specification

First, an integer $t < 500$, describing the number of test cases. Next, for each of the test cases: X, n , and n integers.

Output data specification

For each of the test cases print one word: YES if Robert will be able to compose the required weight, or the word NO if this is impossible.

Example

Input:

```
4
5 3
2 1 3
18 3
11 10 9
5 4
1 2 1 6
23 5
11 1 2 10 18
```

Output:

```
YES
NO
NO
YES
```

Scoring

By solving this problem you score 10 points.