



# Overflowing Cups

 by [trigg](#)

Problem

Submissions

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You're making a casserole and the recipe requires a specific number of cups of water (you're making a lot of casserole) but you only have a few measuring cups, none of them are exactly what you need. Sadly none of the cups have markers so you can't fill them partway. Can you find a way to use these cups together to get the desired amount?

All the cups can be emptied or filled at any time, but you have to fill it all the way to capacity, or empty it all the way to zero.

You can also pour from one cup to another, but again you have to pour to capacity, so if you have a glass with 4 cups and try to pour into one which only takes 3, the one with 4 will lose exactly 3, and have 1 remaining.

NOTE: you have to have all of the water in a single cup for it to count

Will you make the best casserole? Or will you falter with low-quality casserole?

## Input Format

$N$ , the number of measuring cups followed by  $T$ , the target number of cups

then on another line,  $N$  numbers  $C_i$ , each the capacity of a specific cup

## Constraints

$$N \leq 5$$

$$T \leq 20$$

$$C_i \leq 20$$

## Output Format

if you can, output TRUE, otherwise FALSE

## Sample Input 0

```
2 5
1 6
```

## Sample Output 0

```
TRUE
```

## Explanation 0

You can either fill the 1 cup 5 times and put it in the 6, or you can fill the 6 and pour 1 over into the 1 cup

### Sample Input 1

```
1 1
2
```

### Sample Output 1

FALSE

### Explanation 1

You can only fill and empty 2 cups at a time, so this is not possible

[f](#) [t](#) [in](#)

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Max Score: 1

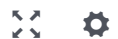
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C++14



```
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
7
8
9 int main() {
10     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11     return 0;
12 }
13
```

Line: 1 Col: 1

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Run Code

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