Recorder

locked

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You are given a recorder that can record up to **M minutes** maximum, and you have **S songs** you can record. You are required to choose some songs from S to record such that the total recorded time is as much as possible and does not exceed M. You cannot record the same song more than once. Use recursive **brute force** to solve this problem.

Input Format

- one line contains the following integers space separated: M (maximum total minutes), S (number of songs to choose from), and then S integers representing the duration of each song.

Constraints

- 1 <= S <= 20
- 1 <= M <= 1000
- 1 <= any song duration <= M

Output Format

- one integer representing the total recorded time that is as much as possible and does not exceed M

Sample Input 0

```
10 4 9 8 4 2
```

Sample Output 0

```
10
```

Sample Input 1

```
20 4 10 5 7 4
```

Sample Output 1

```
19
```

Explanation 1

Choose to record songs with duration 10+5+4 = 19 the maximum possible that does not exceed 20.

C++20

```cpp
#include <cmath>
#include <cstdio>
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;

int main() {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}
```

Line: 1 Col: 1

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