Stick

Objective

The objective of this problem is to test the students' understanding on **Recursion**.

Problem Description

Given a set of sticks, determine the minimum number of sticks needed to form a new stick with length **X**.

Note: each stick can only be used once.

Input

The input consists of two integers **N** (1 <= **N** <= 15), denoting the number of sticks that we have and **X** (1 <= **X** <= 20), denoting the length of the new stick that we want to form. The next line contains the length of those sticks.

Output

Output the minimum number of sticks to form a new stick with length **X**. Output -1 if we cannot form a new stick with length **X**.

Sample Input 1

```
3 5
1 2 6
```

Sample Output 1

```
-1
```

Sample Input 2

```
6 5
1 1 1 1 1 3
```

Sample Output 2

```
3
```

Explanation

Test data 1: The output is -1 since any combination of the sticks given does not allow us to form a new stick with length 5.

Test data 2: There are 2 ways to form a new stick of length 5.

1. Use 5 sticks of length 1, you need 5 sticks.
2. Use 2 sticks of length 1 and 1 stick of length 3, you need 3 sticks.

The second way results in fewer number of sticks used.