

Problem J

Sandra and The Golden Coins

Input : STDIN

Output : STDOUT

There exists  $N$  bags of gold each of which contains  $B_i$  golden coins ( $1 \leq i \leq N$ ). Sandra has to collect at least  $S$  golden coins but she does not have much time. So she decided to pick  $K$  consecutive bags starting from a random index  $j$  ( $1 \leq j \leq N - K + 1$ ).

Help Sandra find the minimum integer  $K$  so that whatever index  $j$  she chooses, it is guaranteed that the sum of coins she will collect ( $b_j + \dots + b_{j+k-1}$ ) be greater than or equal to  $S$ .

If Sandra is unable to collect at least  $S$  golden coins, print «impossible».

IN

The first line contains two integers :  $N$  ( $1 \leq N \leq 10^5$ ) the number of bags, and  $S$  ( $1 \leq S \leq 10^6$ ) the required amount of golden coins.

The second line contains  $N$  integers  $B_1 \dots B_N$  ( $0 \leq B_i \leq 10^5$ ) representing the number of coins in the  $i$ -th bag.

OUT

Print  $K$  if it exists and "impossible" if it doesn't.

|      |                        |        |
|------|------------------------|--------|
| EX 1 | INPUT                  | OUTPUT |
|      | 8 5<br>1 0 4 5 0 0 2 1 | 5      |

|      |                 |            |
|------|-----------------|------------|
| EX 2 | INPUT           | OUTPUT     |
|      | 4 10<br>3 1 1 2 | impossible |

NOTE

Note that the input method specified in the top of this paper is the standard input(stdin). Use these bits of code according to the programming language you are using to be able to read from the stdin.

C++:

```
int myInteger;  
string myString;  
cin >> myInteger >> myString; // read an integer then a string
```

Java (use the following Scanner object):

```
Scanner sc = new Scanner(System.in);  
int myInteger = sc.nextInt(); // read an integer  
String myString = sc.next(); // read a string  
sc.close();
```