Elixir of Merriment

It's Cocktail Night at the Guild of Sorcerers, and the Alchemists have been given the difficult task of brewing the elixir. They know that the wizards will quaff, the warlocks will guzzle, and they themselves will imbibe to a dangerous degree, so it is paramount that their concoction is impeccably brewed.

In the Guild's cellars, there is a long shelf with magical elixir ingredients, each one a slightly different shade of purple. These ingredients can be combined in a great copper vat and boiled beneath the full moon to create the required elixir. These ingredients are extremely rare, and are bewitchingly expensive, so the Alchemists wish to use as few as possible.

However, to be enjoyed by all, the elixir must have a minimum strength. The strength of an elixir is equal to the sum of the strengths of each of its ingredients. The flavour of the elixir can be improved (to make it taste of pineapple) by only using ingredients that are consecutive on the shelf. None of the Sorcerers will drink foul-tasting elixirs, so this is an imperative. You must help the Alchemists find the fewest ingredients to brew their required elixir.

You will be given integers n ($3 \leq n \leq 2^{20}$) and s ($0 \leq s \leq 2^{25}$), denoting the number of ingredients, and the required minimum strength of the elixir respectively. This will be followed by n integers, representing the strength of each ingredient on the shelf ($-2^{20} \leq strength \leq 2^{20}$).

Output the minimum number of ingredients required to make an elixir with a strength of at least s, so that all the chosen ingredients are consecutive. It will always be possible to brew the elixir.

Sample Input 1:

```
5 4
3 1 -4 3 2
```

Sample Output 1:

```
2
```

The ingredients used are [3, 2]

Sample Input 2:

```
8 8
1 6 -3 4 2 -5 3 3
```

Sample Output 2:

```
4
```

The ingredients used are [6, -3, 4, 2]

Sample Input 1:

```
5 10
2 2 2 2 2
```

Sample Output 1:

```
5
```

The ingredients used are [2, 2, 2, 2, 2]