## Fashion Boutique

You own a fashion boutique, and you receive a delivery of a **huge box** **of clothes**, represented as a **sequence of integers**. On the next line, you will be given an integer representing the **capacity** for **one rack** in your store.

You must arrange the clothes in the store, and you use the racks to hang up every piece of clothing. You start **from the last piece** of clothing on the top of the pile **to the first one** at the bottom. Use a **stack** for the purpose. Each piece of clothing has its **value** (an integer). You must **sum** their values, while you take them out of the box. If the sum becomes **equal** to the capacity of the current rack you must **take a new one** for the **next clothes**, if there are **any left** in the box. If the sum becomes **greater** than the capacity, **do not hang** the piece of clothing to the current rack. Take a new rack and then hang up the piece of clothing. In the end, print **how many racks** you have used to hang up the clothes.

### Input

* On the first line you will be given **a sequence of integers**, representing the clothes in the box, separated **by a single space**.
* On the second line, you will be given **an integer**, representing the capacity of a rack.

### Output

* Print the **number of racks**, needed to hang up the clothes from the box.

### Constraints

* The values of the clothes will be integers in the range [0,20]
* There will never be more than **50** clothes in a box
* The capacity will be an integer in the range [0,20]
* **None** of the integers from the box will be **greater** than then the **value** of the **capacity**

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 5 4 8 6 3 8 7 7 9  16 | 5 |
| 1 7 8 2 5 4 7 8 9 6 3 2 5 4 6  20 | 5 |