

ABA12C - Buying Apples!

[#dynamic-programming \(/problems/tag/dynamic-programming\)](/problems/tag/dynamic-programming/)

Harish went to a supermarket to buy exactly 'k' kilograms apples for his 'n' friends. The supermarket was really weird. The pricing of items was very different. He went to the Apples section and enquired about the prices. The salesman gave him a card in which he found that the prices of apples were not per kg. The apples were packed into covers, each containing 'x' kg of apples, $x > 0$ and 'x' is an integer. An 'x' kg packet would be valued at 'y' rupees. So, the placard contained a table with an entry 'y' denoting the price of an 'x' kg packet. If 'y' is -1 it means that the corresponding packet is not available. Now as apples are available only in packets, he decides to buy atmost 'n' packets for his 'n' friends i.e he will not buy more than n packets of apples.

Harish likes his friends a lot and so he does not want to disappoint his friends. So now, he will tell you how many friends he has and you have to tell him the minimum amount of money he has to spend for his friends.

Input

The first line of input will contain the number of test cases, C.

Each test case will contain two lines.

The first line containing N and K, the number of friends he has and the amount of Apples in kilograms which he should buy.

The second line contains K space separated integers in which the ith integer specifies the price of a 'i'kg apple packet. A value of -1 denotes that the corresponding packet is unavailable.

- $0 < N \leq 100$
- $0 < K \leq 100$
- $0 < \text{price} \leq 1000$

Output

The output for each test case should be a single line containing the minimum amount of money he has to spend for his friends. Print -1 if it is not possible for him to satisfy his friends.

Sample I/O

Input :

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


Output :

```
-1
5
```

Explanation of test cases:

1) As there are only 3 and 4kg packets in the shop, he will not be able to satisfy his friends as he would not be able to buy exactly 5kg of apples.

2) He can buy five 1kg packet as he has to buy 5 kg. So the min money he should spend is 5.

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ayush_7219 (/users/ayush_7219): 2021-05-01 20:59:35

poor problem, misleading explanation, dont consider n then you will get AC, i did by considering N by doing 2D dp, but got WA :(



trantheba0 (/users/trantheba0): 2021-02-15 07:06:56

Wait a minute, I'm using memorization with 3 state but I can't figure out my code's time complexity and how to solve it using normal dp base on this code: [don't post any code here]

Last edit: 2021-02-16 00:10:35



distructo (/users/distructo): 2020-12-20 11:00:07

Ignore N...what is wrong with the problem setter :(



imsrvstv (/users/imsrvstv): 2020-11-27 13:41:02

just don't consider 'n' at all while solving. It's super easy then!



tanuj_yadav_07 (/users/tanuj_yadav_07): 2020-11-17 14:16:21

worst problem on spoj i have ever seen



pink_bot1 (/users/pink_bot1): 2020-11-17 13:09:39

Poor problem statement



ch_sanchit (/users/ch_sanchit): 2020-09-03 18:59:09

I wonder how can I solve it considering 'at most n packets'.. Otherwise I hav solved it and it got accepted too. Someone plz help



akarsh777 (/users/akarsh777): 2020-08-29 06:59:22

Last edit: 2020-08-29 06:59:35



arpit8969 (/users/arpit8969): 2020-05-15 12:23:47

it's similar to coin change problem



aryan__0406 (/users/aryan__0406): 2020-05-05 15:06:47

This is a misleading question. Don't consider n while solving it.


And most importantly don't forget to downvote for this question otherwise a lot of precious time of yours will be wasted on solving these type of questions.

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2. Please be careful, leave short comments only. Don't spam here.
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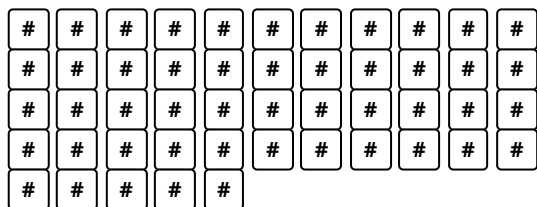
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(/users/kashyap_kumar)
Date: 2012-01-13
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Source limit: 50000B
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- ✗ solve this problem

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