

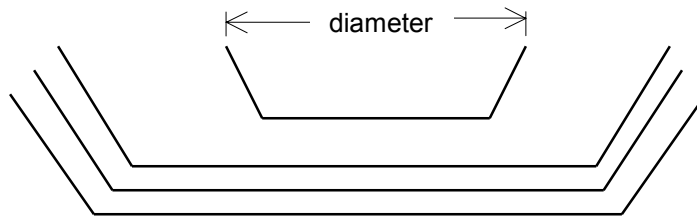
**acm** International Collegiate Programming Contest  
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**Problem No. 4 Baskets**

Executable Program : Prog4.exe, Prog4.class  
Source Program: Prog4.cpp, Prog4.java, Prog4.pas  
Input: Prog4.in, Output: Standard Output

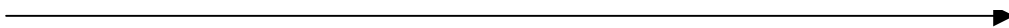
Juan lives in the mountains. He waits all the year for the town's party, because tradesmen from all over the country will come to show and sell their merchandise like baskets, mud pots and a lot of craftsmanship. This year he is planning to buy some baskets. All the baskets are round, having diameter, thickness and colors that make them different from each other. Nevertheless, the problem is how are they going to be carried, because the only truck he owns is small. He also has time restrictions because the stands do not have their own parking space, so he is planning to park in front of the chosen stand, buy the selected basket (only one ) and quickly put it in the truck.

To do this, Juan has decided to cross the stand's street walking with the idea of looking for the merchandise and choose the baskets he would like to buy. He had planned to measure the diameters of all the baskets he would like to buy and write them in his notebook. In this way when he had walked all the stand's street, he would have gotten all the diameter information to decide where he is going to stop his truck to buy. Each basket he buys must keep inside the previous one bought making a stack like is shown in the figure. Suppose the basket's thickness is negligible and no baskets rearrangements can be made because of the time restriction.

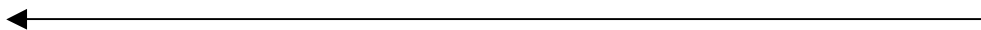


In his walk by the stand's street, Juan had picked up the following diameters of baskets he would like to buy. The diameters are :

Walking Path through the stands selecting baskets and picking up the data



200	1300	1800	1000	100	2000	2500	2900	1100	3000	1200	2400
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Truck Path through the stands buying pieces

To this diameters list Juan has realized that the maximum amount of baskets he can buy is 7.

Input contains multiple cases. Each test case consists of a line containing a single integer  $n$ , (for  $n < 10000$ ) representing the amount of baskets in the list. In the next  $n$  lines, integers representing the diameters of each one of the  $n$  baskets. A line containing a  $-1$  follows the last test case.

### Sample Input

```
12
200
1300
1800
1000
100
2000
2500
2900
1100
3000
1200
2400
5
200
300
500
100
3000
4
1000
700
500
200
-1
```

### Output for Sample Input

```
7
4
1
```