# <u>h</u> ackerearth

Signup and get free access to 100+ Tutorials and Practice Problems

Start Now

All Tracks > Algorithms > Dynamic Programming > Introduction to Dynamic Programming 1 > Problem



## **Xsquare And Coin Collection**

Attempted by: 1143 / Accuracy: 65% / Maximum Score: 20 / 0 Votes

Tag(s): Ad-Hoc, Easy, Implementation

**PROBLEM** 

**EDITORIAL** 

**ANALYTICS** 

Xsquare loves to play with the coins very much. Today, he has **N** stacks of coins. Each stack of coins has some non zero height H<sub>i</sub> equal to the number of coins on that stack (considering all the coins are identical and each coin has a height of 1 unit).

In one move, Xsquare can select any number of consecutive stacks of coins such that the height of each selected stack of coins  $H_i \le K$ . Once such a sequence of stacks is chosen, Xsquare can collect any number of coins from the chosen sequence of stacks.

Xsquare wonders what is the maximum number of coins that he can collect this way?

#### **INPUT**

First line of input contains a single integer T denoting the number of test cases. First line of each test case contains two space separated integers N and K where N being the number of stacks of coins. Second line of each test case contains N space separated integers denoting the number of coins  $H_i$  on each stack.

#### **OUTPUT**

For each test case, Print the maximum number of coins Xsquare can collect following the above gaming strategy.

#### **CONSTRAINTS**

$$1 \le T \le 10^5$$

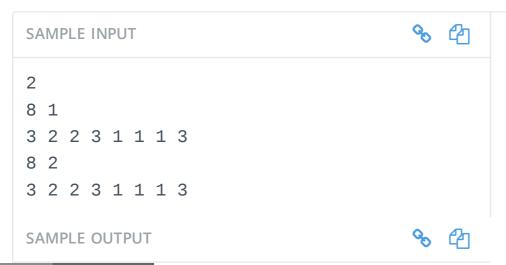
$$1 \le N \le 10^5$$

$$1 \le K \le 10^9$$

$$1 \le H_i \le 10^9$$

#### Note:

sum of N over all the test case will not exceed 10<sup>6</sup>.



4

### **Explanation**

Test 1: N = 8, K = 1 3 2 2 3 1 1 1 3 We can collect coins from stacks numbered 5, 6 and 7.

Test 2: N = 8, K = 2 3 2 2 3 1 1 1 3 We can collect coins from stacks numbered 2 and 3.

| Time Limit:   | 3.0 sec(s) for each input file.  |  |
|---|--|--|
| Memory Limit:   | 256 MB   |  |
| Source Limit:   | 1024 KB  |  |
| Marking Scheme:   | Marks are awarded when all the testcases pass.   |  |
| Allowed Languages: C, C++, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Lisp, |  |  |
|   | (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, |  |

### **CODE EDITOR**

Initializing Code Editor...

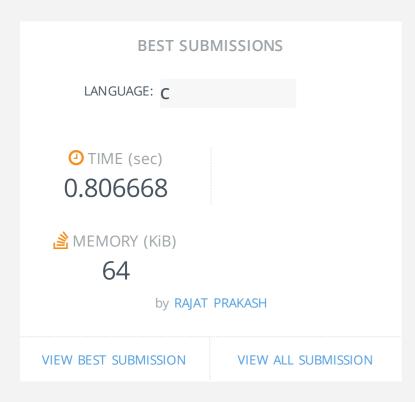
Your Rating:

Scala 2.11.8, Swift, Visual Basic

| PROGRAMMERS WHO SOLVED THIS PROBLEM ALSO SOLVED               |   |  |
|---|---|--|
| Xsquare And Balanced Strings Attempted By: 990 / Accuracy: 57 | Samu And Shopping Attempted By: 2882 / Accuracy: 40 |  |
|   |   |  |
|   |   |  |

### Prime Numbers Again

Attempted By: **521** / Accuracy: **54** 



#### **CONTRIBUTOR**



AUTHOR **m**a5termind



TESTER Prateek Gupta

#### THIS PROBLEM WAS ASKED IN



CHALLENGE NAME

#### **SOCIAL SHARE**









#### **ABOUT US** HACKEREARTH **DEVELOPERS EMPLOYERS REACH US** AMA Developer Sourcing Ground Floor, Salarpuria Business Center, Blog API 4th B Cross Road, 5th A Block, Chrome Extension Code Monk Engineering Blog Lateral Hiring Koramangala Industrial Layout, Updates & Releases CodeTable Judge Environment Campus Hiring Bangalore, Karnataka 560095, India. Hackathons HackerEarth Solution Guide Team Academy contact@hackerearth.com Problem Setter Careers FAQs +91-80-4155-4695 Developer Profile Guide In the Press Customers **\( +1-650-461-4192** Resume **Practice Problems** HackerEarth Get Badges Challenges Campus Ambassadors College Challenges Get Me Hired College Ranking Organise Hackathon Privacy Terms of Service Hackathon Handbook

Competitive Programming

Open Source



© 2017 HackerEarth